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U. S. DEPARTMENT OF AGRICULTURE

OFFICE OF EXPERIMENT STATIONS.



ORGANIZATION LISTS
OF THE
AGRICULTURAL EXPERIMENT STATIONS
AND
INSTITUTIONS WITH COURSES IN AGRICULTURE
IN THE
UNITED STATES.

PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE.

JANUARY, 1895.

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LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE,
OFFICE OF EXPERIMENT STATIONS,
Washington, D. C., February 1, 1895.

SIR: I have the honor to transmit herewith, for publication, Bulletin
No. 23 of this Office.

Respectfully,

A. C. TRUE,
Director.

Hon. J. STERLING MORTON,
Secretary of Agriculture.

LIST OF ABBREVIATIONS.

| | |
|---|--|
| <i>Agr.</i> , Agriculture, Agriculturist, Agricultural. | <i>Lib.</i> , Librarian. |
| <i>Anal.</i> , Analytical. | <i>Lit.</i> , Literature. |
| <i>Anal.</i> , Anatomy. | <i>Math.</i> , Mathematics. |
| <i>Arbor.</i> , Arboriculture, Arboriculturist. | <i>Mech.</i> , Mechanics, Mechanical. |
| <i>Assoc.</i> , Associate. | <i>Met.</i> , Meteorology, Meteorologist. |
| <i>Asst.</i> , Assistant. | <i>Mil.</i> , Military. |
| <i>Astron.</i> , Astronomy. | <i>Min.</i> , Mineralogy, Mineralogist. |
| <i>Bact.</i> , Bacteriology, Bacteriologist. | <i>Myc.</i> , Mycologist. |
| <i>Biol.</i> , Biology, Biologist, Biological. | <i>Phys.</i> , Physics, Physicist, Physical. |
| <i>Bot.</i> , Botany, Botanist, Botanical. | <i>Physiol.</i> , Physiology, Physiological, Physiologist. |
| <i>Chair.</i> , Chairman. | <i>Polit.</i> , Political. |
| <i>Chem.</i> , Chemist, Chemistry, Chemical. | <i>Prep.</i> , Preparatory. |
| <i>Dept.</i> , Department. | <i>Pres.</i> , President. |
| <i>Dir.</i> , Director. | <i>Prin.</i> , Principal. |
| <i>Econ.</i> , Economy, Economic. | <i>Psych.</i> , Psychology. |
| <i>Elect.</i> , Electrical, Electricity. | <i>Rhet.</i> , Rhetoric. |
| <i>Engin.</i> , Engineer, Engineering. | <i>Sci.</i> , Science. |
| <i>Ent.</i> , Entomology, Entomologist. | <i>Sec.</i> , Secretary. |
| <i>Expt.</i> , Experiment. | <i>Sta.</i> , Station. |
| <i>For.</i> , Forestry. | <i>Sten.</i> , Stenographer, Stenography. |
| <i>Geol.</i> , Geology, Geologist, Geological. | <i>Supt.</i> , Superintendent. |
| <i>Gov.</i> , Governor. | <i>Treas.</i> , Treasurer. |
| <i>Hist.</i> , History. | <i>Univ.</i> , University. |
| <i>Hort.</i> , Horticulture, Horticulturist. | <i>V. Dir.</i> , Vice Director. |
| <i>Instr.</i> , Instructor. | <i>Vet.</i> , Veterinary, Veterinarian. |
| <i>Irrig.</i> , Irrigation. | <i>Vit.</i> , Viticulture, Viticulturist. |
| <i>Lab.</i> , Laboratory. | <i>Zool.</i> , Zoology, Zoologist. |

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| J. L. Buchanan, LL. D., <i>Pres.; Psych. and Ethics.</i> | Seth E. Meek, Ph. D., (<i>Adjunct Biol. and Geol.; Curator Museum.</i> |
| A. E. Menke, D. Sc., <i>Agr., Chem., and Phys.</i> | Jesse L. Cravens, B. L., <i>Instr. Elocution.</i> |
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| J. F. McNeill, B. S., <i>Biol. and Geol.</i> | Mrs. S. E. Meek, <i>Instr. Music.</i> |
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| ———, <i>Mil. Sci. and Tactics.</i> | G. A. Cole, jr., B. A., <i>Asst. in Prep. Dept.</i> |
| J. J. Knoch, C. E., (<i>Adjunct Civil Engin</i> | Mary E. Washington, <i>Asst. in Prep. Dept.</i> |
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| Ella H. Carnall, Ph. M., (<i>Adjunct English and Modern Languages.</i> | Naomi J. Williams, M. A., <i>Asst. in Prep. Dept.</i> |
| Geo. W. Droke, M. A., (<i>Adjunct Math.</i> | Mary Davis, B. A., <i>Asst. in Prep. Dept.</i> |
| | Julia A. Garside, <i>Lib.</i> |
| | Wm. F. Bates, <i>Foreman Farm.</i> |
| | J. M. Moore, <i>Asst. Foreman Farm.</i> |
| | V. H. Caywood, <i>Engin.</i> |
| | C. H. Chesebro, <i>Janitor.</i> |

CALIFORNIA.

College of Agriculture of the University of California, Berkeley.

COURSE OF STUDY.

The course of study requires four years for completion and leads to the degree of B. S.

BOARD OF INSTRUCTION.

- | | |
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| I. Stringham, Ph. D., <i>Dean; Math.</i> | F. V. Paget, B. L., B. S., <i>French and Spanish.</i> |
| E. W. Hilgard, Ph. D., LL. D., <i>Agr. and Agr. Chem.</i> | F. L. Winn, 1st Lieut. 12th Infantry, U. S. A., <i>Mil. Sci. and Tactics.</i> |
| E. J. Wickson, M. A., (<i>Assoc.</i>) <i>Agr., Hort., and Ent.</i> | W. J. Sharwood, <i>Instr. Chem.</i> |
| R. H. Loughridge, Ph. D., (<i>Asst.</i>) <i>Agr. Geol. and Agr. Chem.</i> | M. A. Howe, Ph. B., <i>Instr. Cryptogamic Bot.</i> |
| E. L. Greene, Ph. B., <i>Bot.</i> | A. B. Pierce, M. A., <i>Instr. Math.</i> |
| W. B. Rising, M. A., M. E., Ph. D., <i>Chem.</i> | W. D. Armes, Ph. B., <i>Instr. English.</i> |
| E. O'Neill, Ph. B., (<i>Asst.</i>) <i>Chem.</i> | T. F. Sanford, B. A., <i>Instr. English.</i> |
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| A. C. Lawson, M. A., Ph. D., (<i>Assoc.</i>) <i>Min. and Geol.</i> | C. S. H. Howard, <i>Instr. French.</i> |
| C. W. Woodworth, M. S., (<i>Asst.</i>) <i>Ent.</i> | H. I. Randall, B. S., <i>Instr. Civil Engin.</i> |
| G. C. Edwards, Ph. B., (<i>Assoc.</i>) <i>Math.</i> | J. Sutton, Ph. B., <i>Recorder.</i> |
| M. W. Haskell, Ph. D., (<i>Assoc.</i>) <i>Math.</i> | M. E. Jaffa, Ph. B., <i>Instr. Agr.</i> |
| A. O. Lenschuer, B. A., (<i>Asst.</i>) <i>Astron. and Geodesy.</i> | G. E. Colby, Ph. B., <i>Instr. Vit.</i> |
| F. Slate, B. S., <i>Phys.</i> | W. J. Raymond, B. S., <i>Instr. Phys.</i> |
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| W. E. Ritter, M. A., (<i>Asst.</i>) <i>Biol. (on leave.)</i> | A. P. Hayne, Ph. B., <i>Asst. Vit.</i> |
| H. P. Johnson, Ph. D., (<i>Asst.</i>) <i>Biol. (ad interim.)</i> | C. L. Gilman, <i>Asst. in Chem.</i> |
| H. Kower, C. E., <i>Asst. Instr. Drawing.</i> | R. S. Norris, B. S., <i>Asst. in Chem.</i> |
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| | L. T. Hengstler, Ph. D., <i>Instr. in Math.</i> |
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| | A. V. Saph, B. S., <i>Fellow in Math.</i> |
| | W. H. Wright, B. S., <i>Fellow in Math.</i> |
| | J. C. Rowell, B. A., <i>Lih.</i> |

COLORADO.

The State Agricultural College of Colorado, Fort Collins.

COURSES OF STUDY.

The courses of study are four, each requiring four years in addition to one year of preparatory work, and each leading to the degree of B. S.: The agricultural course, the mechanical course, the irrigation engineering course, and the ladies' course. Provision is made for post-graduate work. The degrees of C. E. and M. E. are conferred upon those worthy of holding them, by faculty action approved by the governing board.

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| L. G. Carpenter, M. S., <i>Phys. and Irrig. Engin.</i> | Mattie J. Wulfjen, <i>Elocution and Calisthenics.</i> |
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| Grace Espey Patton, B. S., <i>English and Sten.</i> | R. E. Trimble, B. S., <i>Asst. in Met.</i> |
| W. J. Meyers, B. S., <i>Math.</i> | M. J. Huffington, <i>Asst. in Hort.</i> |
| D. W. Working, B. S., <i>Sec. Faculty.</i> | L. M. Taylor, B. S., <i>Sten.</i> |

CONNECTICUT.

Sheffield Scientific School of Yale University, New Haven.

COURSES OF STUDY.

Courses of instruction occupying three years and leading to the degree of Ph. B. are arranged to suit the requirements of students. The first year's work is the same for all; for the last two years the instruction is chiefly arranged in special courses. Those most distinctly marked out are the following: In chemistry, in civil engineering, in mechanical engineering, in agriculture, in natural history, in biology preparatory to medical studies, in studies preparatory to mining and metallurgy, and in select studies preparatory to other higher studies. Under certain conditions the degrees of civil engineer and mechanical (or dynamical) engineer are conferred on bachelors of philosophy who have taken the first degree in engineering, and who pursue a higher course under the direction of the governing board of the school for at least two years.

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 W. G. Mixter, M. A., *Chem.*
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 C. S. Hastings, Ph. D., *Phys.*
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 R. H. Chittenden, Ph. D., *Physiol. Chem.*
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 W. W. Nichols, M. E., *Instr. Mech. Engin.*
 W. L. Cross, Ph. D., *Instr. English.*
 A. Guyot Cameron, Ph. D., *Asst. French.*
 A. J. Wakeman, Ph. D., *Instr. Anal. Chem.*
 W. A. Setchell, Ph. D., *Instr. Biol.*
 R. N. Corwin, Ph. D., *Instr. German.*
 E. H. Lockwood, M. E., *Instr. Drawing and Mechanism.*
 W. I. Lowe, B. A., *Instr. History.*
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 J. C. Tracy, C. E., *Instr. Civil Engin.*
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 H. A. Bumstead, B. A., *Instr. Physics.*
 W. R. Coe, Ph. B., *Asst. in Biol.*
 P. T. Walden, Ph. B., *Instr. in Anal. Chem.*
 M. A. Pond, Ph. B., *Asst. in Drawing.*
 F. M. Adams, Ph. B., *Asst. in Phys.*
 C. C. Wilson, B. A., *Asst. in Mechanism.*
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 B. B. Boltwood, Ph. B., *Asst. Chem.*
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Storrs Agricultural College, Storrs.

COURSE OF STUDY.

The course of study requires two or four years for completion and in the latter case leads to a degree.

BOARD OF INSTRUCTION.

- B. F. Koons, Ph. D., *Pres.*
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 L. J. Barber, *Instr. Math. and English.*
 E. J. Lewis, *Rhet. and English Lit.*
 Lottie J. Short, *Domestic Sci.*

DELAWARE.

Delaware College, Newark.

COURSES OF STUDY.

The courses of study are seven, and require four years each for completion: The classical course and the Latin scientific course, each leading to the degree of B. A.; the course in modern languages and science, leading to the degree of B. S.; the courses in engineering, leading to the degrees of C. E., M. E., and E. E.; and the agricultural course, leading to the degree of B. Agr. There are also a two years' course and a short winter course of thirteen weeks in agriculture.

BOARD OF INSTRUCTION.

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| A. N. Raub, Ph. D., <i>Pres.</i> ; <i>English, Mental, Moral and Polit. Sci.</i> | C. L. Penny, M. A., <i>German.</i> |
| T. R. Wolf, Ph. D., <i>Chem., Min., Sanitary Sci., and Geol.</i> | F. H. Robinson, C. E., <i>Civil Engin.</i> |
| G. A. Harter, Ph. D., <i>Math. and Phys.</i> | W. H. Bishop, B. S., <i>Agr., Bot., and Physiol.</i> |
| C. S. Conwell, M. A., <i>Ancient and Modern Languages.</i> | H. W. Huffington, <i>Mech. and Elect. Engin.</i> |
| | H. P. Eves, D. V. S., <i>Vet. Sci.</i> |
| | Lieut. J. H. Frier, <i>Mil. Sci. and Tactics.</i> |

State College for Colored Students, Dover.

COURSES OF STUDY.

There are five courses of study: Classics, science, agriculture, engineering, and chemistry.

BOARD OF INSTRUCTION.

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| | L. D. Hileland, <i>Instr.</i> |

FLORIDA.

Florida State Agricultural College, Lake City.

COURSES OF STUDY.

Besides a preparatory department there are four collegiate courses of study, each requiring four years for completion: The agricultural course, leading to the degree of B. S.; the mechanical course, leading to the degree of B. S.; the Latin scientific course, leading to the degree of B. A.; and the women's course, leading to the degree of B. S. These courses are equivalent in length, in difficulty, and in honor.

BOARD OF INSTRUCTION.

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| C. V. Waugh, <i>Philosophy and Ancient Languages.</i> | A. L. Quaintance, M. S., <i>Instr. Biol.</i> |
| John B. Parkinson, <i>Penmanship, Bookkeeping, and Commercial Law.</i> | Aurora Mena, <i>Instr. Spanish</i> |

Florida State Normal School, Tallahassee.

COURSES OF STUDY.

The courses of study are four: Preparatory, normal, manual training, and agricultural.

BOARD OF INSTRUCTION.

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| T. DeS. Tucker, M. A., <i>Pres.</i> | Alexander Cuppige, <i>Agr.</i> |
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| D. W. Onley, <i>Manual Training and Chem.</i> | M. L. Anderson, <i>Domestic Econ.</i> |
| P. Von Weller, <i>English.</i> | Frederica F. Jones, M. A., <i>Prin. Prep. Dept.</i> |
| C. B. Tucker, <i>Dairying.</i> | Mrs. F. Reynolds Keyser, <i>Matron.</i> |

GEORGIA.

Georgia State College of Agriculture and Mechanic Arts, *Athens.*

COURSES OF STUDY.

There are two courses of study, requiring four years each for completion and leading to the degrees of B. S. and B. E.; one three years' course, leading to the degree of B. Agr.; graduate courses of one year each, leading to degrees of M. S., C. E., and M. Agr.; special courses in chemistry, mining and metallurgy, in agriculture, in electrical engineering, and in building and architecture, in which certificates of attainment are given. There is also a short winter course in agriculture, comprising instruction in the English branches, agriculture, and dairying.

BOARD OF INSTRUCTION

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| L. H. Charbonnier, M. A., Ph. D., <i>Phys.</i> | J. B. Hammitt, B. A., <i>Agr.</i> |
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| B. F. Riley, M. A., <i>English.</i> | C. H. Herty, Ph. D., (<i>Adjunct</i>) <i>Chem.</i> |
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| C. M. Strahan, C. and M. E., <i>Engin.</i> | O. E. Sheffield, B. E., <i>Instr. Drawing.</i> |
| John P. Campbell, B. A., Ph. D., <i>Biol.</i> | Jno. Morris, M. A., <i>Instr. English.</i> |
| H. J. Wing, <i>Instr. Dairying.</i> | |

IDAHO.

College of Agriculture of the University of Idaho, *Moscow.*

COURSE OF STUDY.

The regular course in agriculture requires four years for completion and the elementary course two years.

BOARD OF INSTRUCTION.

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|--|---|
| F. B. Gault, M. S., <i>Pres.</i> ; <i>Logic, Polit. Econ., and Ethics.</i> | C. P. Fox, M. Agr., <i>Agr.</i> |
| J. E. Ostrander, M. A., C. E., <i>Civil Engin. and Mech. Arts.</i> | E. R. Chrisman, 2d Lieut. U. S. A., <i>Mil. Sci. and Tactics.</i> |
| C. W. McCurdy, D. Sc., <i>Chem.</i> | ———, <i>Min. and Metallurgy.</i> |
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| L. F. Henderson, Ph. B., <i>Bot.</i> | Harriet E. Cushman, <i>Preceptress; Instr. in Lit.</i> |
| J. M. Aldrich, M. S., <i>Zool.</i> | S. Annette Bowman, <i>Instr. Drawing.</i> |
| Sarah E. Poe, B. L., <i>Instr. in Prep. School.</i> | |

ILLINOIS.

College of Agriculture of the University of Illinois, Urbana.

COURSES OF STUDY.

The regular courses of study are two: The full course, requiring four years for completion and leading to the degree of B. S.; and a special course for farmers, beginning in January and continuing eleven weeks. Provision is also made for special students.

BOARD OF INSTRUCTION.

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|--|--|
| Andrew S. Draper, LL. D., <i>Pres.</i> | William H. Vandervoort, M. E., <i>Mech. Engin.</i> |
| Eugene Davenport, M. S., <i>Dean; Animal Husbandry.</i> | Evarts B. Greene, Ph. D., <i>Hist.</i> |
| Thomas J. Burrill, Ph. D., LL. D., <i>Bot. and Hort.</i> | Arthur H. Daniels, Ph. D., <i>Philosophy.</i> |
| Stephen A. Forbes, Ph. D., <i>Zool.</i> | George W. Parker, <i>Wood Working.</i> |
| Charles W. Rolfe, M. S., <i>Geol.</i> | Harry S. Grindley, D. Sc., <i>Chem.</i> |
| Donald McIntosh, V. S., <i>Vet. Sci.</i> | George P. Clinton, M. S., <i>Bot.</i> |
| Arthur W. Palmer, D. Sc., <i>Chem.</i> | T. Arkle Clark, B. L., <i>English.</i> |
| Frank F. Frederick, <i>Art and Design.</i> | Alice M. Barber, M. S., <i>Bot.</i> |
| Samuel W. Parr, M. S., <i>Applied Chem.</i> | Herman S. Piatt, M. A., <i>French.</i> |
| Daniel W. Shea, Ph. D., <i>Phys.</i> | Frank Smith, M. A., <i>Zool.</i> |
| David Kinley, Ph. D., <i>Econ.</i> | George W. McCluer, M. S., <i>Hort.</i> |
| Daniel H. Brush, Capt. 17th Infantry, U. S. A., <i>Mil. Sci.</i> | Henry Jones, <i>Blacksmith.</i> |
| Katharine Merrill, B. A., <i>English.</i> | Harley E. Reeves, <i>Mil. Sci.</i> |
| William O. Krohn, Ph. D., <i>Psych.</i> | Ralph P. Smith, Ph. B., <i>German.</i> |
| Henry E. Summers, B. S., <i>Physiol.</i> | Peter Mogenssen, B. S., <i>Math.</i> |
| Edgar J. Townsend, Ph. M., <i>Math.</i> | Helen E. Butterfield, M. L., <i>English.</i> |
| | Edward J. Lake, <i>Art and Design.</i> |
| | Fred. A. Sager, B. S., <i>Phys.</i> |

INDIANA.

School of Agriculture, Horticulture, and Veterinary Science of Purdue University, Lafayette.

COURSE OF STUDY.

The course of study requires four years for completion and leads to the degree of B. S.

BOARD OF INSTRUCTION.

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| Moses C. Stevens, M. A., <i>Higher Math.</i> | M. J. Golden, <i>Practical Mech.</i> |
| Oscar J. Craig, M. A., Ph. D., <i>Polit. Econ. and Hist.</i> | Chas. S. Plumb, B. S., <i>Agr. Sci.</i> |
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| Henry A. Huston, M. A., A. C., <i>Agr. Chem.</i> | Alfred M. Amadon, M. A., <i>Math.</i> |
| Mrs. Emma Mont. McRae, <i>Lady Prin.; English Lit.</i> | Walter Jones, Ph. D., <i>Anal. Chem.</i> |
| Joseph C. Arthur, D. Sc., <i>Vegetable Physiol. and Pathology.</i> | Harold B. Smith, M. E., <i>Elect. Engin.</i> |
| Stanley Coulter, M. A., Ph. D., <i>Biol.</i> | A. W. Duff, M. A., B. S., <i>Phys. and Theory of Elect.</i> |
| | Fred Morley, C. E., <i>Civil Engin.</i> |

A. W. Bitting, B. S., *Vet. Sci.*
 Samuel W. Miller, 1st Lieut. 5th Infantry,
 U. S. A., *Mil. Sci. and Tactics.*
 Carolyn Gerrish, *Instr. Elocution and*
English.
 Abby Lytle, *Instr. Industrial Arts.*
 W. K. Hatt, B. A., C. E., (*Assoc.*) *Civil*
Engin.
 W. E. Goldsborough, M. E., *Elect. Engin.*
 Geo. Spitzer, Ph. G., *Instr. Pharmacy.*
 James D. Hoffman, B. M. E., *Instr. Wood*
Shop.
 Julius Stuermer, Ph. G., *Instr. Materia*
Medica.
 Wm. P. Turner, *Instr. Machine Work.*
 Chas. D. Peterson, B. C. E., *Instr. Mech.*
Drawing.
 Anna E. Baker, M. S., *Instr. Wood Carv-*
ing and Model Drawing.

Richard A. Smart, B. M. E., *Instr. in Mech.*
Lab.
 Wm. H. Test, M. S., *Instr. in Chem.*
 Katherine E. Golden, M. S., *Instr. in Biol.*
 John E. Kolb, B. M. E., *Asst. in Foundry*
and Forging.
 E. E. Reynolds, B. M. E., *Asst. Elect.*
Lab.
 D. W. McKenney, B. M. E., *Asst. in Wood-*
work.
 A. L. Fulkerson, B. M. E., *Asst. in Found-*
ry.
 C. A. Baechtold, B. M. E., *Asst. in Mech.*
Drawing.
 Leonard D. Worden, Ph. G., *Asst. in*
Pharmacy.
 Benj. M. Hoak, *Asst. in Pharmacy.*
 M. D. Strout, *Asst. in Mech. Lab*
 Elizabeth Day Swan, *Lib.*

IOWA.

Iowa State College of Agriculture and Mechanic Arts, Ames.

COURSES OF STUDY.

The courses of study are eight: The course in agriculture, leading to the degree of B. Agr.; the course in veterinary science, leading to the degree of D. V. M.; the course in mechanical engineering, leading to the degree of B. M. E.; the course in civil engineering, leading to the degree of B. C. E.; the course in electrical engineering, leading to the degree of B. E. E.; the course in mining engineering, leading to the degree of B. M. E.; the course in sciences as related to the industries, leading to the degree of B. S., and the course for ladies, leading to the degree of B. L.

The veterinary course requires three years for completion; each of the others four years. There are also a two years' course and a short winter course in agriculture and dairying.

BOARD OF INSTRUCTION.

W. M. Beardshear, M. A., LL. D., *Pres.*;
Psych. and Ethics.
 M. Stalker, M. S., V. S., *Vet. Sci.*
 J. L. Budd, M. H., *Hort.*
 E. W. Stanton, M. S., *Math. and Econ. Sci.*
 Gen. J. R. Lincoln, *Mil. Sci. and Mining*
Engin.
 A. A. Bennett, M. S., *Chem.*
 Herbert Osborn, M. S., *Zool. and Ent.*
 L. H. Pammel, B. Agr., M. S., *Bot.*
 Mrs. Eliza Owens, *Domestic Econ.*
 James Wilson, *Agr.*
 J. B. Weems, Ph. D., *Agr. Chem.*
 Margaret Doolittle, B. A., *English, Latin,*
and Rhet.
 W. S. Franklin, M. S., *Phys. and Elect.*
Engin.
 G. W. Bissell, M. E., *Mech. Engin.*
 A. Marston, C. E., *Civil Engin.*

Celia Ford, B. A., *Preceptress; French and*
German.
 I. W. Smith, B. S., M. D., *Pathology, His-*
tology, Therapeutics, and Comparative
Anat.
 Marie L. Chambers, *Elocution; Dir. Music.*
 W. H. Wynn, Ph. D., D. D., *English Lit.*
and Hist.
 C. F. Curtiss, B. Agr., (*Asst.*) *Agr.*
 W. B. Niles, D. V. M., (*Asst.*) *Vet. Sci.*
 W. H. Meeker, M. E., (*Asst.*) *Mech. Engin.*
 S. W. Beyer, B. S., (*Asst.*) *Geol. and Zool.*
 N. E. Hansen, B. S., (*Asst.*) *Hort.*
 T. Lenox, *Instr. in Machine Shop.*
 L. B. Spinney, B. M. E., *Asst. in Mech.*
Engin. and Phys.
 Minnie Roberts, B. L., *Asst. in Math.*
 J. S. Chamberlain, M. S., *Asst. in Chem.*
 Julia Wentch, B. L., *Asst. in Math.*

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|---|---|
| Elmina Wilson, B. C. E., <i>Asst. in Civil Engin.</i> | A. A. Harter, <i>Instr. in Blacksmithing.</i> |
| A. R. Wake, D. V. M., <i>House Surgeon.</i> | Flora Wilson, B. L., <i>Lib.</i> |
| G. L. McKay, <i>Instr. in Dairying and Cheese Making.</i> | Emma Pammel, <i>Asst. in Chem.</i> |
| D. Nordstrum, <i>Instr. in Carpentry.</i> | S. R. Fitz, <i>Asst. in Chem.</i> |
| | Genevieve Westermann, <i>Instr. in Piano and Organ.</i> |
| | Carrie Scott, <i>Inst. Violin and Theory.</i> |

KANSAS.

Kansas State Agricultural College, Manhattan.

COURSES OF STUDY.

The regular course of study requires four years for completion and leads to the degree of B. S. Special and post-graduate courses are also provided. The degree of M. S. is given upon post-graduate study with satisfactory evidence of proficiency, after three years, in science and industrial arts.

BOARD OF IN-TRUCTION.

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|---|---|
| Geo. T. Fairchild, LL. D., <i>Pres.; Logic and Philosophy.</i> | E. R. Nichols, M. A., <i>Phys.</i> |
| G. H. Failyer, M. S., <i>Chem. and Min.</i> | N. S. Mayo, M. S., D. V. S., <i>Physiol. and Vet. Sci.</i> |
| E. A. Popenoe, M. A., <i>Ent. and Zool.</i> | J. T. Willard, M. S., <i>Chem.</i> |
| D. E. Lantz, M. S., <i>Math.</i> | A. S. Hitchcock, M. S., <i>Bot.</i> |
| J. D. Walters, M. S., <i>Industrial Art and Designing.</i> | S. C. Mason, M. S., <i>Hort.; Supt. Gardens.</i> |
| I. D. Graham, M. A., <i>Sec.; Instr. Book-keeping.</i> | Josephine Harper, <i>Instr. Math.</i> |
| O. E. Olin, <i>English Language and Lit.</i> | Alice Rupp, <i>Instr. English.</i> |
| Mrs. Nellie S. Kedzie, M. S., <i>Household Econ. and Hygiene.</i> | H. M. Jones, B. A., <i>Instr. Rhetoricals.</i> |
| Mrs. Elida E. Winchip, <i>Supt. Sewing.</i> | H. G. Cavanaugh, Capt. 13th Infantry, U. S. A., <i>Mil. Sci. and Tactics.</i> |
| O. P. Hood, B. S., <i>Mech. and Engin.; Supt. Shops.</i> | T. E. Will, M. A., <i>Polit. Econ.</i> |
| A. B. Brown, M. A., <i>Music.</i> | Julia R. Pearce, B. S., <i>Lib.</i> |
| J. S. C. Thompson, <i>Supt. Printing.</i> | C. M. Breese, M. S., <i>Asst. in Chem.</i> |
| F. H. White, M. A., <i>Hist. and Polit. Sci.</i> | Laura G. Day, B. S., <i>Asst. in Sewing.</i> |
| C. C. Georgeson, M. S., <i>Agr.; Supt. Farm.</i> | Ruth T. Stokes, <i>Asst. in House Econ.</i> |
| | Wm. Baxter, <i>Foreman Greenhouse.</i> |
| | W. L. House, <i>Foreman Carpenter Shop.</i> |
| | H. K. Brooks, <i>Foreman Iron Shop.</i> |
| | L. A. McKeen, <i>Foreman of Farm.</i> |

KENTUCKY.

Agricultural and Mechanical College of Kentucky, Lexington.

COURSES OF STUDY.

The regular courses of study are six, each requiring four years for completion: The agricultural course, leading to the degree of B. S.; the scientific course, leading to the same degree; the classical course, leading to the degree of B. A.; the mechanical engineering course, leading to the degree of M. E.; the civil engineering course, leading to the degree of C. E., and the normal course, leading to the degree of B. Ped. Certificates of proficiency are given to those who do not complete a course undertaken.

BOARD OF INSTRUCTION.

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|--|--|
| J. K. Patterson, Ph. D., <i>Pres.</i> ; <i>Metaphysics and Civil Hist.</i> | S. M. Swigert, Capt. U. S. A., <i>Mil. Sci.</i> |
| J. Shackelford, M. A., <i>V. Pres.</i> ; <i>English Language and Lit.</i> | J. W. Pryor, M. D., <i>Anat. and Physiol.</i> |
| J. G. White, M. A., <i>Math. and Astron.</i> | W. K. Patterson, <i>Prin. Academy.</i> |
| Paul Wernicke, <i>French and German Languages and Lit.</i> | J. L. Logan, B. A., <i>Asst. in Academy.</i> |
| J. H. Neville, M. A., <i>Latin and Greek Languages and Lit.</i> | J. W. Newman, B. S., <i>Asst. in Normal Dept.</i> |
| J. H. Kastle, Ph. D., <i>Chem.</i> | R. L. Blanton, M. Lit., <i>Asst. in Greek and Latin.</i> |
| R. N. Roark, B. A., <i>Prin. Normal Dept.</i> | J. M. Davis, B. A., B. S., <i>Asst. in Academy.</i> |
| H. Garman, <i>Zool. and Ent.</i> | V. E. Muncey, B. S., <i>Asst. in Academy.</i> |
| C. W. Mathews, B. S., <i>Agr., Hort., and Bot.</i> | J. H. Wells, B. M. E., <i>Asst. in Mech. Engin.</i> |
| J. P. Nelson, M. A., <i>Civil Engin. and Phys.</i> | J. R. Johnson, B. M. E., <i>Asst. in Mech. Engin.</i> |
| M. L. Pence, M. S., <i>Phys.</i> | Mrs. Lucy B. Blackburn, <i>Asst. in Academy.</i> |
| F. Paul Anderson, B. M. E., <i>Mech. Engin.</i> | W. A. Patterson, B. S., <i>Asst. in Hist.</i> |
| | James Murray, <i>Practical Hort.</i> |

State Normal School, Frankfort.

COURSES OF STUDY.

There are four courses of study. Normal course, agricultural course, mechanical course, and a course in domestic economy.

BOARD OF INSTRUCTION.

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| J. H. Jackson, M. A., <i>Prin.</i> | Ida Joyce Jackson, <i>Teacher.</i> |
| M. A. Davis, <i>Teacher.</i> | Lizzie E. Green, <i>Teacher.</i> |
| Celia A. Hathaway, <i>Teacher.</i> | J. S. Hathaway, M. A., <i>Teacher.</i> |

LOUISIANA.

Louisiana State University and Agricultural and Mechanical College,
Baton Rouge.

COURSES OF STUDY.

The regular courses of study are five, each requiring four years for completion: The course in agriculture, the course in mechanics and civil engineering, the Latin-scientific, the general science, and the classical course, the first four leading to the degree of B. S., the last to the degree of B. A. A preparatory department and a two years' commercial course are also provided.

BOARD OF INSTRUCTION.

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| J. W. Nicholson, M. A., LL. D., <i>Pres.</i> ; <i>Math.</i> | C. A. Smith, M. A., Ph. D., <i>English and English Lit.</i> |
| W. H. Gordon, 1st Lieut. 18th Infantry, U. S. A., <i>Mil. Sci. and Tactics.</i> | S. B. Staples, B. S., D. V. S., <i>Vet. Sci.</i> |
| W. W. Clendenen, M. A., M. S., <i>Geol., Min., and Bot.</i> | William C. Stubbs, Ph. D., <i>Agr.</i> |
| Charles E. Coates, jr., Ph. D., <i>Chem.</i> | D. N. Barrow, B. S., (<i>Asst.</i>) <i>Agr.</i> |
| W. H. Goodale, <i>Philosophy and Civics.</i> | F. B. Burnette, (<i>Asst.</i>) <i>Hort.</i> |
| B. F. Hoffman, M. L., (<i>Asst.</i>) <i>Languages.</i> | W. D. Taylor, C. E., <i>Phys. and Civil Engin.</i> |
| H. A. Morgan, B. S. A., <i>Zool. and Ent.</i> | H. Skolfield, <i>Instr. Bookkeeping.</i> |
| J. H. Randolph, jr., C. E., <i>Drawing and Mech.</i> | C. E. Ives, B. A., <i>Prin. Prep. Dept.</i> |
| E. L. Scott, M. A., <i>Languages.</i> | C. A. Ives, B. S., <i>Instr. Prep. Dept.</i> |
| | C. K. Thompson, B. S., C. E., <i>Instr. Prep. Dept.</i> |
| | R. G. Pleasant, B. A., <i>Instr. Prep. Dept.</i> |

Southern University and Agricultural and Mechanical College, New Orleans.

COURSE OF STUDY.

The courses in agriculture require two and four years for completion and lead to the degree of B. S.

BOARD OF INSTRUCTION.

H. A. Hill, *Pres.*; *Math.*
 Hugh Jamieson, *Agr.*
 William Seymour, *Mech.*
 L. M. Martinet, *Bot.*
 A. B. Kennedy, *Econ. Sci.*

V. L. Roy, *Chem. and Phys.*
 W. J. Nickerson, *Music.*
 Chas. E. Roos, *English.*
 E. E. Duncan, *Prin. Girls' Industrial Section.*

MAINE.

The Maine State College, Orono.

COURSES OF STUDY.

The courses of study leading to degrees are eight, each requiring four years. These are the scientific course, the civil-engineering course, the mechanical-engineering course, the electrical-engineering course, the agricultural course, the chemical course, the pharmacy course, the preparatory medical course. The course in civil engineering leads to the degree of B. C. E., the course in mechanical and electrical engineering to B. M. E., the other courses to B. S. The shorter courses leading to a certificate are as follows: The course in library economy of one year, the course in pharmacy of two years, and training courses of six weeks each, designed for farmers, in general agriculture, in dairying, and in horticulture.

BOARD OF INSTRUCTION.

Abram W. Harris, M. A., D. Sc., *Pres.*
 George H. Hamlin, C. E., *Civil Engin.*
 Alfred B. Aubert, M. S., *Chem.*
 Allen E. Rogers, M. A., *Hist., Logic, and Polit. Econ.*
 Walter Flint, M. E., *Mech. Engin.*
 Whitman H. Jordan, M. S., *Agr.*
 Francis L. Harvey, M. S., Ph. D., *Natural Hist.*
 James N. Hart, C. E., *Math. and Astron.*
 Howard S. Webb, B. M. E., *Shop Work; Sec. and Registrar.*
 Fremont L. Russell, V. S., *Vet.*
 Nathau C. Grover, C. E., *Civil Engin.*

Harriet C. Fernald, M. S., *Lib.*
 Welton M. Munson, B. S., *Hort.*
 Horace M. Estabrooke, M. S., M. A., *Rhet. and Modern Languages.*
 James S. Stevens, M. S., Ph. D., *Phys.*
 Mark L. Hersey, M. A., *Lient. 9th Infantry, U. S. A., Mil. Sci. and Tactics.*
 Gilbert M. Gowell, M. S., *Animal Husbandry.*
 David W. Colby, B. S., *Chem.*
 Ernest P. Chapin, B. M. E., *Elect. Engin.*
 A. J. Durgin, *Carpentry.*
 George P. Cowan, B. C. E., *Civil Engin.*
 Frank Damon, *Phys.*

Wendell W. Chase, *Drawing.*

MARYLAND.

Maryland Agricultural College, College Park.

COURSE OF STUDY.

The course of study requires four years and leads to the degree of B. S.

BOARD OF INSTRUCTION.

R. W. Silvester, *Pres.*; *Math.*
 H. B. McDonnell, M. D., *Chem.*
 W. H. Zimmerman, M. A., *Phys.*; *Instr.*
German.
 R. H. Alvey, jr., B. A., *English.*
 J. H. Grisard, 2d Lieut., U. S. A., *Mil. Sci.*
and Tactics, Math., and Drawing.
 H. G. Welty, C. E., *Applied Math.*
 Jas. S. Robinson, *Bot. and Hort.*
 M. P. Scott, M. D., *Zool. and Comparative*
Anat.

Dr. Robert Ward, *Vet.*
 Thos. H. Spence, *Latin, French, and*
German.
 W. T. L. Taliaferro, *Agr.*
 H. M. Strickler, *Phys. Culture.*
 F. P. Veitch, B. S., *Asst. Chem.*
 F. B. Bomberger, B. S., *Asst. Chem.*
 H. C. Sherman, B. S., *Asst. Chem.*
 H. T. Harrison, *Prin. Prep. Dept.*
 J. R. Owens, M. D., *Registrar; Sec. and*
Treas. Faculty.

John D. Ford, *Mech. Engin.*

MASSACHUSETTS.

Massachusetts Agricultural College, Amherst.

COURSE OF STUDY.

The course of study requires four years and leads to the degree of B. S.

BOARD OF INSTRUCTION.

H. H. Goodell, M. A., LL. D., *Pres.*; *Mod-*
ern Languages and English Lit.
 Levi Stockbridge, *Agr.*
 C. A. Goessmann, Ph. D., LL. D., *Chem.*
 S. T. Maynard, B. S., *Bot. and Hort.*
 Charles Wellington, Ph. D., (*Assoc.*)
Chem.
 C. H. Fernald, Ph. D., *Zool.*
 C. S. Walker, Ph. D., *Mental and Polit.*
Sci.
 W. P. Brooks, B. S., *Agr.*
 W. M. Dickinson, 1st Lieut. 17th Infantry, U. S. A., *Mil. Sci. and Tactics.*

G. F. Mills, M. A., *English.*
 R. W. Lyman, LL. B., *Lecturer on Farm*
Law.
 J. B. Paige, V. S., *Vet. Sci.*
 E. R. Flint, Ph. D., *Asst. in Chem.*
 G. E. Stone, Ph. D., *Asst. in Bot.*
 A. C. Washburne, *Asst. in Math.*
 H. Babson, B. A., *Asst. in English.*
 F. S. Cooley, B. S., *Asst. in Agr.*
 R. S. Lull, B. S., *Asst. in Zool.*
 R. E. Smith, B. S., *Instr. in Bot. and Ger.*

MICHIGAN.

Michigan Agricultural College, Agricultural College.

COURSES OF STUDY.

The courses of study are two, each requiring four years for completion and leading to the degree of B. S.—the agricultural course and the mechanical course. A post-graduate course is also provided.

BOARD OF INSTRUCTION.

L. G. Gorton, M. S., *Pres.*
 R. C. Kedzie, M. A., M. D., *Chem.*; *Cura-*
tor Chem. Lab.
 W. B. Barrows, B. S., *Zool. and Ent.*; *Cur-*
ator General Museum.
 William J. Beal, M. S., Ph. D., *Bot. and*
For.; *Curator Bot. Museum.*
 E. A. A. Grange, V. S., *Vet. Sci.*
 I. H. Butterfield, *Sec.*
 Levi R. Taft, M. S., *Hort. and Landscape*
Gardening; Supt. Hort. Dept.

Howard Edwards, M. A., LL. D., *English*
Lit. and Modern Languages.
 C. L. Weil, B. S., *Mech. Engin.*; *Dir. Shops.*
 Herman K. Vedder, C. E., *Math. and Cerd*
Engin.
 C. D. Smith, M. S., *Agr.*; *Supt. Farm.*
 Edison A. Lewis, 2d Lieut. 18th Infantry,
 U. S. A., *Mil. Sci. and Tactics.*
 Frank S. Kedzie, (*Adjunct*) *Chem.*
 William S. Holdsworth, M. S., (*Asst.*)
Drawing.

- Philip B. Woodworth, B. S., M. E., (*Asst.*) *Phys.*
 Alvin B. Noble, Ph. B., (*Asst.*) *English Lit. and Modern Languages.*
 W. O. Hedrick, B. S., (*Asst.*) *Hist. and Polit. Econ.*
 F. B. Mumford, B. S., (*Asst.*) *Agr.*
 C. C. Pashby, B. S., *Instr. Math.*
 Warren Babcock, jr., B. S., (*Asst.*) *Math.*
 P. M. Chamberlain, M. E., (*Asst.*) *Mech. Engin.*
 D. J. Crosby, B. S., *Instr. English.*
 A. L. Westcott, B. M. E., *Instr. Mech. Engin.*
 G. C. Davis, M. S., *Instr. Ent.*
 C. F. Wheeler, B. S., *Instr. Bot.*
 R. C. Bradley, *Asst. Sec.*
 H. M. Howe, *Clerk.*
 C. E. Hoyt, *Foreman Wood Shops.*
 E. A. Edgerton, *Engin.*
 Mrs. Linda E. Landon, *Lib.*
 Thomas Gunson, *Foreman Greenhouses.*
 V. V. Newell, B. S., *Foreman Iron Shops.*
 Ernst Wittstock, *Foreman of Farm.*
 Thos. Durkin, *Foreman of Gardens.*

MINNESOTA.

College of Agriculture of the University of Minnesota, Minneapolis.

COURSE OF STUDY.

The course of study requires four years for completion, and leads to the degree of B. Agr.

BOARD OF INSTRUCTION.

- Cyrus Northrop, LL.D., *Pres.*
 W. M. Hays, B. S. A., *Agr.*
 S. B. Green, B. S., *Hort.*
 Otto Lugger, Ph. D., *Ent.*
 Harry Snyder, B. S., *Agr. Chem.*
 T. L. Haecker, *Instr. Dairy Husbandry.*
 M. H. Reynolds, M. D., V. M., *Vet. Sci.*
 Thos. Shaw, *Animal Husbandry.*
 H. W. Brewster, Ph. D., (*Asst.*) *Math.*

MISSISSIPPI.

Mississippi Agricultural and Mechanical College, Agricultural College.

COURSE OF STUDY.

The course of study requires four years for completion and leads to the degree of B. S. Post-graduate courses and a preparatory course are also provided.

BOARD OF INSTRUCTION.

- S. D. Lee, *Pres.*
 W. C. Welborn, B. S., *Agr.*
 A. B. McKay, B. S., *Hort.*
 A. J. Wiechardt, M. M. E., *Mech. Arts.*
 G. C. Creelman, B. S. A., *Biol.*
 Tait Butler, V. S., *Vet. Sci.*
 W. L. Hutchinson, M. S., *Chem.*
 W. H. Magruder, M. A., *English.*
 B. M. Walker, M. S., *Math.*
 C. L. Steele, 1st Lieut. 18th Infantry, U. S. A., *Mil. Sci. and Tactics; Asst. Math.*
 Dabney Lipscomb, M. A., *Psych. and Ethics; Prin. Prep. Dept.*
 S. M. Tracy, M. S., *Dir. Expt. Sta.*
 J. S. Wier, B. S., *Instr. Drawing and Blacksmithing.*
 W. R. Perkins, B. S., *Asst. Chem.*
 E. L. Robins, B. S., *Asst. Chem.*
 W. F. Hand, B. S., *Asst. Chem.*
 J. M. White, M. S., *Hist. and Civics; Asst. English.*
 J. T. Connell, B. S., *Asst. English.*
 J. C. Herbert, M. S., *Asst. Math.*
 J. S. Wallace, B. S., *1st Asst. Prep. Dept.*
 A. M. Maxwell, *Instr. Writing and Book-keeping.*
 R. C. King, B. S., *Sec. and Purchasing Agent.*
 F. J. Weddell, B. S., *Sten.*
 W. H. Barr, M. D., *Surgeon.*
 E. A. Grosvenor, *Hospital Nurse.*
 W. H. Galloway, *Steward and Proctor.*
 J. F. Montgomery, *Foreman Farm.*
 C. T. Ames, B. S., *Foreman Hort. Dept.*
 S. L. Grinstead, *Instr. Carpentry and Foundry Work.*

Alcorn Agricultural and Mechanical College, *Westside.*

COURSES OF STUDY.

The courses of study are three: The academic course of three years; the scientific preparatory course of two years, and the scientific course, requiring four years for completion and leading to the degree of B. S.

BOARD OF INSTRUCTION.

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| Thomas J. Calloway, B. A., <i>Pres.</i> | C. A. Snodgrass, B. S., <i>Instr. English Branches.</i> |
| A. J. Howard, M. A., <i>Math.</i> | G. J. Williams, B. S., <i>Instr. English Branches.</i> |
| H. A. Clark, <i>Polit. Econ., Bookkeeping and Rhet.</i> | R. B. Swayze, <i>Instr. English Branches.</i> |
| Joseph Anderson, M. A., <i>Phys., Chem., and Hist.</i> | J. B. Bemis, <i>Instr. Carpentering.</i> |
| H. L. Stiles, B. S., (<i>Asst.</i>) <i>English Branches.</i> | W. Logan, <i>Instr. Blacksmithing.</i> |
| H. C. Ferguson, <i>Instr. Agr.</i> | T. A. Greene, <i>Instr. Printing.</i> |
| B. F. Ousley, B. D., <i>Instr. Biol.</i> | A. J. Wade, <i>Instr. Shoemaking.</i> |

Nathan Bright, *Steward.*

MISSOURI.

College of Agriculture and Mechanic Arts of the University of Missouri,
Columbia.

COURSE OF STUDY.

The course of study requires four years for completion and leads to the degree of B. Agr. There are also two short courses—a farmers' lecture course of three months and a two years' elementary course. The college also offers a post-graduate course, which requires two years for completion, and leads to the degree of M. Agr.

BOARD OF INSTRUCTION.

| | |
|---|---|
| R. H. Jesse, LL. D., <i>Pres.</i> | G. C. Broadhead, M. S., <i>Geol. and Min.</i> |
| P. Schweitzer, Ph. D., <i>Acting Dean.; Chem.</i> | Alexander Martin, M. A., LL. D., <i>Lecturer on Agr. Law.</i> |
| W. J. Quick, M. S., <i>Agr.</i> | C. W. Marx, B. E., <i>Supt. School Mech. Arts.</i> |
| J. C. Whitten, B. S., <i>Hort.</i> | A. H. Place, C. E., <i>Drawing.</i> |
| E. A. Allen, L. D., <i>English.</i> | H. Van Blarcom, <i>Asst. in Mech. Arts.</i> |
| L. M. DeFoe, Ph. D., <i>Math.</i> | M. S. King, <i>Instr. Commercial School.</i> |
| Howard Ayers, Ph. D., <i>Biol.</i> | J. W. Connaway, M. D., D. V. S., <i>Vet. Sci.</i> |
| M. L. Lipscomb, M. A., <i>Phys.</i> | F. C. Hicks, Ph. D., <i>Hist. and Polit. Sci.</i> |
| S. A. Smoke, Lieut. U. S. A., <i>Mil. Sci.</i> | |

MONTANA.

The Montana College of Agriculture and Mechanic Arts, *Bozeman.*

COURSES OF STUDY.

There are courses of study in agriculture, domestic economy, applied science, and business. The first three require four years each for completion and lead to degrees; the business courses require one and two years and lead to no degree. Preparatory work is also provided.

BOARD OF INSTRUCTION.

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| Rev. James Reid, B. A., <i>Pres.; Mental, Moral, and Polit. Sci.</i> | W. L. Williams, V. S., <i>Vet. Sci., Physiol., and Zool.</i> |
| A. M. Ryon, M. E., <i>Engin.</i> | B. F. Maiden, B. A., <i>English; Prin. Prep. Dept.</i> |
| S. M. Emery, <i>Hort.</i> | A. G. Phelps, <i>Prin. Business Dept.</i> |
| Luther Foster, M. S. A., <i>Agr. and Bot.</i> | Mrs. F. E. Marshall, <i>Free-Hand Drawing and Wood Carving.</i> |
| F. W. Traphagen, Ph. D., F. C. S., <i>Chem. and Natural Sci.</i> | W. M. Cobleigh, M. E., <i>Asst. Chem. and Phys.</i> |
| R. E. Chandler, M. E., <i>Math. and Mech. Engin.</i> | Jennie Jones, <i>Asst. Sten. and Typewriting.</i> |

NEBRASKA.

Industrial College of the University of Nebraska, Lincoln.

COURSES OF STUDY.

The courses of study are as follows, each requiring four years for completion and leading to the degree of B. S.: General scientific course, electrical and steam engineering course, agricultural course, and civil engineering course. One and two years' courses in elementary agriculture are also provided.

BOARD OF INSTRUCTION.*

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|--|---|
| James H. Canfield, M. A., LL.D., <i>Chancellor.</i> | E. H. Barbour, Ph. D., <i>Geol.</i> |
| C. L. Ingersoll, M. S., <i>Dean; Agr.</i> | H. B. Ward, Ph. D., <i>Zool.</i> |
| H. H. Nicholson, M. A., <i>Chem.</i> | F. M. Fling, Ph. D., <i>European Hist.</i> |
| L. A. Sherman, Ph. D., <i>English Lit.</i> | W. G. Taylor, Ph. D., <i>Polit. and Econ. Sci.</i> |
| C. E. Bessey, Ph. D., <i>Bot.</i> | F. W. Card, M. S., <i>Hort.</i> |
| DeW. B. Brace, Ph. D., <i>Phys.</i> | R. B. Owens, E. E., <i>Elect. Engin.</i> |
| E. W. Davis, Ph. D., <i>Math.</i> | O. V. P. Stout, B. C. E., <i>Civil Engin.</i> |
| J. J. Pershing, 1st Lieut. 10th Cavalry, U. S. A., <i>Mil. Sci. and Tactics.</i> | Lawrence Bruner, <i>Ent.</i> |
| J. W. Adams, B. L., <i>English.</i> | C. R. Richards, M. E., <i>Manual Training.</i> |
| H. W. Caldwell, M. A., <i>American Hist. and Civics.</i> | R. A. Clark, B. A., M. D., <i>Dir. Gymnasium, Phys. Training.</i> |
| A. H. Edgren, Ph. D., <i>Romance Languages.</i> | G. E. Barber, M. A., <i>Latin</i> |
| Laurence Fossler, M. A., <i>Germanic Languages.</i> | Cora Parker, <i>Instr. Clay Modeling and Wood Carving.</i> |
| | W. B. Hampsen, M. E., <i>Mech. Drawing.</i> |

NEVADA.

School of Agriculture of the Nevada State University, Reno.

COURSE OF STUDY.

The regular course requires four years for completion and leads to the degree of B. S. A short course in agriculture is also provided, requiring five months of each year for four years and leading to no degree.

*Includes only the principal instructors in the Industrial College. Other members of the university faculty also give some instruction in this college.

BOARD OF INSTRUCTION.

- Joseph E. Stubbs, M. A., D. D., LL. D., *Pres.*
 Hannah K. Clapp, M. A., *Preceptress and Lib.*
 W. McN. Miller, B. S., *Anat., Phys., and Geol.*
 R. D. Jackson, Ph. B., *Mining, Metallurgy, and Assaying.*
 J. Warne Phillips, D. Sc., *Chem. and Phys.*
 F. H. Hillman, M. S., *Ent. and Bot.*
 Mrs. Mary W. Emery, *Pedagogy; Prin. Normal School.*
 Robert Lewers, *Polit. Econ. and Commercial Law.*
 W. R. Hamilton, 1st Lieut. 5th Artillery, U. S. A., *Mil. Sci. and Tactics, Math., and French.*
 R. H. McDowell, B. S., *Agr. and Hort.*
 T. W. Cowgill, M. A., *English.*
 Richard Brown, *Supt. Mech. Dept.*
 Henry Thurtell, B. S., *Mech. and Mech. Drawing.*
 James E. Church, jr., B. A., *Instr. Latin.*
 Frederick Stadtmüller, B. S., *Chem. and Phys.*

NEW HAMPSHIRE.

New Hampshire College of Agriculture and the Mechanic Arts, Durham.

COURSES OF STUDY.

There are five courses of study, each requiring four years for completion, and leading to the degree of B. S.: Course in agriculture, course in chemistry, course in mechanical engineering, course in electrical engineering, and general course open to women.

BOARD OF INSTRUCTION.

- C. S. Murkland, M. A., Ph. D., *Pres.*
 Chas. H. Pettee, M. A., C. E., *Dean; Math. and Civil Engin.*
 Clarence W. Scott, M. A., *Hist. and Polit. Sci.*
 H. E. Alvord, *Agr.*
 Clarence M. Weed, D. S., *Zool. and Ent.*
 Fred. W. Morse, B. S., *Organic Chem.*
 Henry C. Hodges, jr., 1st Lieut. U. S. A., *Mil. Sci.*
 Chas. L. Parsons, B. S., *General and Anal. Chem.*
 Albert Kingsbury, M. E., *Mech. Engin.*
 H. H. Lamson, M. D., *Biol. and Bact.*
 Geo. L. Teeple, M. E., *Instr. Elect. Engin. and Phys.*
 R. W. E. Bassett, M. A., *Instr. Modern Languages.*
 John N. Brown, *Foreman Machine Work.*
 Allen G. Lowell, *Foreman Woodwork.*

NEW JERSEY.

Rutgers Scientific School, New Brunswick.

COURSES OF STUDY.

There are five distinct courses of study: A course in agriculture, a course in civil engineering and mechanics, a course in chemistry, a course in electricity, and a course in biology. Each course requires four years for completion and leads to the degree of B. S.

BOARD OF INSTRUCTION.

- Austin Scott, Ph. D., LL. D., *Pres.; Hist. and Polit. Sci.*
 Jacob Cooper, D. D., D. C. L., *Logic and Mental Philosophy.*
 Carl Meyer, D. D., *Modern Languages and Lit.*
 F. C. Van Dyck, Ph. D., *Phys. and Experimental Mech.*
 E. A. Bowser, C. E., LL. D., *Math. and Engin.*
 Edwin B. Davis, B. L., *Instr. Modern Languages.*
 C. E. Hart, D. D., *English Language and Lit.*
 Louis Bevier, jr., Ph. D., *Greek; Sec. Extension Dept.*
 E. S. Shurtway, Ph. D., *Latin.*
 A. A. Titsworth, M. S., C. E., *Graphics and Math.*
 Julius Nelson, Ph. D., *Biol.*

- B. D. Halsted, D. Sc., *Bot. and Hort.*
 J. B. Smith, D. Sc., *Ent.*
 E. B. Voorhees, M. A., *Agr.*
 W. R. Duryee, D. D., *Ethics, Evidences of Christianity, and English Bible.*
 A. H. Chester, M. E., Ph. D., D. Sc., *Chem. and Min.; Curator Museum.*
 J. J. Brereton, 1st Lieut. 24th Infantry, U. S. A., *Mil. Sci. and Tactics.*
 J. C. Van Dyke, L. H. D., *History of Art.*
 R. W. Prentiss, M. S., *Math. and Astron.*
 E. R. Payson, Ph. D., *History and Art of Teaching.*
 E. L. Stevenson, Ph. D., *Hist.*
 I. S. Upson, M. A., *Lib. and Registrar; Sec. Faculty.*
 C. L. Speyers, Ph. B., (*Assoc.*) *Chem.*
 Thomas Logie, Ph. D., (*Assoc.*) *Romance Languages.*
 E. L. Barbour, *Instr. Elocution.*
 W. E. Breazeale, M. M. P., *Instr. Math.*
 Eugene Betts, M. S., *Instr. Elec. and Phys.*
 W. S. Myers, M. S., F. C. S., *Instr. in Chem.*
 C. E. Adams, A. M., M. D., *Instr. Phys. Culture; Dir. Gymnasium.*

NEW MEXICO.

New Mexico College of Agriculture and Mechanic Arts, Mesilla Park.

COURSES OF STUDY.

The courses of study are four: A course in agriculture, a course in mechanical engineering, a course in civil engineering, and a scientific course.

BOARD OF INSTRUCTION.

- S. P. McCrea, *Pres.; Psych. and Logic.*
 J. P. Owen, *V. Pres.; Hist. and Polit. Sci.*
 A. E. Blount, M. A., *Agr. and Hort.*
 E. O. Wooton, B. S., *Bot. and Geol.*
 C. T. Hagerty, B. S., *Math. and Astron.*
 Arthur Goss, M. S., A. C., *Chem.*
 A. E. Davisson, *Prin. Prep. Dept.*
 T. D. A. Cockerell, *Physiol., Ent., and Zool.*
 Horace Ropes, B. S., *Civil and Mech. Engin.*
 Ida M. Jones, *Spanish; Asst. Prep. Dept.*
 Lola Dorego, *Music, Elocution, and Reading.*
 F. E. Lester, *Sten. and Typewriting; Clerk.*
 R. F. Hare, M. S., *Asst. Chem.*
 O. L. Miller, *Bookkeeping.*
 J. P. Stewart, *Telegraphy.*
 Fabian Garcia, *Asst. Agr. and Hort.*
 Charles Mills, *Foreman Wood Shop.*

NEW YORK.

Cornell University, Ithaca.

COURSES OF STUDY.

Among the numerous courses of study offered by the university is one which leads to the degree of bachelor of science in agriculture. This course requires four years for completion, and during the last two years the student selects most of his studies in those departments of the university in which he is interested. Post-graduate courses leading to the degrees of M. S. and D. Sc. are provided, and special courses in subjects relating to agriculture are also arranged.

BOARD OF INSTRUCTION.*

- Jacob G. Schurman, D. Sc., LL. D., *Pres.*
 Geo. C. Caldwell, B. S., Ph. D., *Chem. and Agr. Chem.*
 James Law, F. R. C. V. S., *Vet. Medicine and Surgery.*
 Albert N. Prentiss, M. S., *Bot., Hort., and Arbor.*
 Isaac P. Roberts, M. Agr., *Agr.*
 John H. Comstock, B. S., *Ent. and General Invertebrate Zool.*
 L. H. Bailey, M. S., *General and Experimental Hort.*
 Geo. F. Atkinson, Ph. B., (*Asst.*) *Cryptogamic Bot.*
 Henry H. Wing, M. S., (*Asst.*) *Animal Industry and Dairy Husbandry.*
 Louis M. Dennis, Ph. B., B. S., (*Asst.*) *Anal. Chem.*
 Joseph E. Trevor, Ph. D., (*Asst.*) *Chem. and Agr. Chem.*
 Willard W. Rowlee, D. Sc., (*Asst.*) *Bot.*
 E. G. Lodeman, B. S., *Instr. Hort.*
 A. D. MacGillivray, *Asst. in Ent.*
 G. C. Watson, M. S., *Asst. in Agr.*
 Jared Van Wagenen, jr., B. S. A., *Instr. Dairy Husbandry.*
 W. W. Hall, *Instr. Dairy Husbandry.*

* Includes only instructors in subjects directly relating to agriculture. Many other members of the university faculty may give instruction to students pursuing the course leading to the degree of B. S. in agriculture.

NORTH CAROLINA.

The North Carolina College of Agriculture and Mechanic Arts, Raleigh.

COURSES OF STUDY.

The general courses of study are three, each requiring four years for completion: The agricultural course, leading to the degree of B. S. A., the mechanical course, leading to the degree of B. E., and the course in applied science, leading to the degree of B. S.

BOARD OF INSTRUCTION.

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|---|--|
| Alexander Q. Holladay, <i>Pres.</i> ; <i>Hist.</i> | C. B. Park, <i>Supt. Shops.</i> |
| W. F. Massey, C. E., <i>Hort., Arbor., and Bot.</i> | B. S. Skinner, <i>Asst. in Agr. and Hort. Practice.</i> |
| W. A. Withers, M. A., <i>Chem.</i> ; <i>Sec.</i> | L. T. Yarborough, B. E., <i>Instr. Mech.</i> |
| D. H. Hill, M. A., <i>English.</i> | Chas. Pearson, B. E., <i>Instr. Mech.</i> |
| B. Irby, M. S., <i>Agr.</i> | S. E. Asbury, B. S., <i>Instr. Chem.</i> |
| Richard Henderson, Lieut. U. S. N., <i>Mil. Tactics and Phys.</i> | B. F. Walton, B. S., <i>Instr. Dairying.</i> |
| W. C. Riddick, B. A., C. E., <i>Mech. and Applied Math.</i> | F. P. Williamson, D. V. S., <i>Lecturer on Vet. Sci.</i> |
| R. E. L. Yates, M. A., (<i>Adjunct</i>) <i>Math.</i> | C. D. Franks, B. E., <i>Tutor Subfreshman Class.</i> |
| F. E. Emery, B. S., (<i>Asst.</i>) <i>Agr.</i> | Mrs. Sue C. Carroll, <i>Matron.</i> |
| C. M. Pritchett, B. S., <i>Instr. Mech.</i> | J. B. Dunn, M. D., <i>Physician</i> |

NORTH DAKOTA.

North Dakota Agricultural College, Fargo.

COURSES OF STUDY.

The course in agriculture requires four years for completion and leads to the degree of B. S. In addition to the regular course there is a short course in agriculture and domestic economy, which requires three months in each of two consecutive winters for completion.

BOARD OF INSTRUCTION.

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|--|--|
| J. B. Power, <i>Pres.</i> | L. S. Bottenfield, M. A., <i>Modern Languages.</i> |
| E. F. Ladd, B. S., <i>Chem.</i> | H. W. McArdle, B. S., <i>Instr. Math.</i> |
| T. D. Hinebaugh, M. S., V. S., <i>Vet. Sci.</i> | W. H. Whalen, Ph. B., <i>Instr. English.</i> |
| C. B. Waldron, B. S., <i>Hort. and For.</i> | W. G. Hayden, <i>Accountant and Bursar.</i> |
| H. L. Bolley, M. S., <i>Bot. and Zool.</i> | E. E. Kaufman, B. S. A., <i>Asst. in Agr.</i> |
| E. S. Keene, B. S., <i>Mech.</i> | Mrs. P. A. Evans, <i>Lib.</i> |
| J. H. Shepperd, M. S. A., <i>Agr.</i> | W. G. Hiatt, <i>Supt. Farm.</i> |
| Miss M. B. Schm, M. S., <i>Domestic Science.</i> | |

OHIO.

Ohio State University, Columbus.

COURSES OF STUDY.

The general courses of study are five, requiring four years each for completion, and leading respectively to the degrees of B. A., Ph. B., and B. S. There are now three courses leading to the degree of Ph. B.; in one the languages are Latin and French, in another German and French, while in the third English studies predominate. The following technical courses are provided: A course for the degree of B. S. in agri-

culture, requiring four years; a course for the degree of B. S. in horticulture and forestry, requiring four years; a course for the degree of D. V. M., requiring three years; a course preparatory to the study of medicine, requiring three years; a course for the degree of C. E., requiring four years; two courses for the degree of M. E., each requiring four years, one in mechanical engineering, and one in electrical engineering; a course for the degree of engineer of mines, requiring four years; a course for the degree of B. S. in industrial arts, requiring four years; a course for the degree of graduate in pharmacy, requiring three years; a short course in agriculture, requiring two years; a short course in mining, requiring two years; a course in ceramics or clay-making, requiring two years; and a course in dairying, requiring three months. Provision is also made for post-graduate study leading to degrees, and for one year of preparatory work.

BOARD OF INSTRUCTION.

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|---|---|
| W. H. Scott, M. A., LL. D., <i>Pres.; Philos- ophy.</i> | F. A. Ray, M. E., (<i>Asst.</i>) <i>Mining Engin.</i> |
| Edward Orton, PH. D., LL. D., <i>Geol.</i> | Dewitt Goodrich, (<i>Asst.</i>) <i>Dairying.</i> |
| S. A. Norton, PH. D., LL. D., <i>Chem.</i> | B. B. Herrick, <i>Lecturer on Cheese Making.</i> |
| N. S. Townshend, M. D. (<i>Emeritus</i>) <i>Agr.</i> | W. K. Moorehead, <i>Curator.</i> |
| S. W. Robinson, C. E., <i>Mech. Engin.</i> | C. W. Mesloh, B. A., <i>Asst. in German.</i> |
| N. W. Lord, M. E., <i>Min. and Metallurgy.</i> | J. R. Taylor, B. A., <i>Asst in Drawing and Rhet.</i> |
| S. C. Derby, M. A., <i>Latin.</i> | C. L. Arnold, B. S., <i>Asst. in Math.</i> |
| W. R. Lazenby, M. AGR., <i>Hort. and For.</i> | C. B. Morrey, B. A., <i>Asst. in Physiol.</i> |
| J. R. Smith, M. A., <i>Greek.</i> | C. A. Dye, PH. G., <i>Asst. in Pharmacy.</i> |
| H. A. Weber, PH. D., <i>Agr. Chem.</i> | L. M. Bloomfield, B. AGR., <i>Asst. in Agr. Chem.</i> |
| B. F. Thomas, PH. D., <i>Phys. and Elect. Engin.</i> | F. J. Combs, <i>Foreman Forge Room.</i> |
| G. W. Knight, PH. D., <i>Hist. and Polit. Sci.</i> | E. A. Kemmler, C. E., <i>Asst. in Civil Engin.</i> |
| H. J. Detmers, D. V. M., <i>Vet. Surgery.</i> | H. C. Lord, B. S., <i>Asst. in Math. and Astron.</i> |
| R. D. Bohannon, B. S., C. E., M. E., <i>Math. and Astron.</i> | J. E. Boyd, B. S., <i>Asst. in Phys.</i> |
| D. S. Kellicott, PH. D., <i>Zool. and Ent.</i> | E. A. Hitchcock, M. E., <i>Asst. in Mech. Engin.</i> |
| C. N. Brown, C. E., <i>Civil Engin.</i> | Florence Bascom, PH. D., <i>Asst. in Geol.</i> |
| E. A. Eggers, <i>German.</i> | J. H. McGregor, B. S., <i>Asst. in Biol.</i> |
| Albert M. Bleile, M. D., <i>Anat. and Physiol.</i> | N. H. Brown, <i>Asst. in Phys.</i> |
| Eugene T. Wilson, 2d Lieut. 1st Artillery, U. S. A., <i>Mil. Sci. and Tactics.</i> | C. R. Watson, B. A., <i>Asst. in Latin and French.</i> |
| W. A. Kellerman, PH. D., <i>Bot.</i> | Paul Fischer, D. V. M. <i>Asst. in Vet. Medi- cine.</i> |
| Thos. F. Hunt, B. S., <i>Agr.</i> | D. S. White, D. V. M., <i>Asst. in Vet. Medicine.</i> |
| Rev. A. C. Barrows, M. A., D. D., <i>English Lit.</i> | C. W. Weick, <i>Foreman Pattern Room.</i> |
| G. B. Kauffman, B. S., <i>Pharmacy.</i> | W. A. Knight, <i>Foreman Machine Room.</i> |
| B. L. Bowen, PH. D., <i>Romance Languages and Lit.</i> | T. E. French, <i>Asst. in Drawing.</i> |
| J. V. Denny, B. A., <i>Sec. Faculty; Rhet.</i> | E. Bradford, <i>Keeper Chem. Storeroom.</i> |
| J. N. Bradford, M. E., <i>Drawing.</i> | K. D. Swartzel, <i>Asst. in Math.</i> |
| A. L. Williston, B. S., <i>Dir. Industrial Arts.</i> | Miss H. Townshend, <i>Asst. in Lib.</i> |
| Edward Orton, jr., M. E., <i>Dir. Ceramics.</i> | Miss N. Herrick, <i>Asst. in Lib.</i> |
| O. B. Jones, <i>Lib.</i> | J. A. Wilgus, <i>Asst. in Hist.</i> |
| R. I. Fulton, M. A., <i>Elocution and Oratory.</i> | J. A. Ritchey, B. S., <i>Asst. in Chem.</i> |
| G. W. McCoard, M. A., (<i>Asst.</i>) <i>Math.</i> | C. A. Davis, <i>Asst. in Mining Chem.</i> |
| W. H. Siebert, M. A., (<i>Asst.</i>) <i>Hist. and Polit. Sci.</i> | E. F. M. Wilcox, <i>Asst. in Bot.</i> |
| Wm. McPherson, jr., M. S., (<i>Asst.</i>) <i>Chem.</i> | T. K. Lewis, B. S., <i>Asst. in Drawing.</i> |
| F. C. Caldwell, B. A., (<i>Asst.</i>) <i>Elect. Engin.</i> | O. J. Bailey, <i>Asst. in Dairying.</i> |

OKLAHOMA.

Oklahoma Agricultural and Mechanical College, *Stillwater*.

COURSE OF STUDY.

The course of study requires four years for completion and leads to the degree of B. S.

BOARD OF INSTRUCTION.

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| E. D. Murdaugh, M. A., <i>Pres.</i> | F. A. Waugh, B. S., <i>Hort.</i> |
| J. C. Neal, Ph. C., M. D., <i>Natural Sci.</i> | F. E. Miller, M. A., <i>English; Lib.</i> |
| A. C. Magruder, B. S., <i>Agr.</i> | H. E. Thompson, B. S., <i>Prin. Prep. Dept.</i> |
| E. F. Clark, <i>Math.</i> | W. F. Little, <i>Instr. Tactics.</i> |
| G. L. Holter, B. S., <i>Chem. and Phys.</i> | Jessie Thatcher, <i>Asst. Lib.</i> |

OREGON.

Oregon State Agricultural College, *Corvallis*.

COURSES OF STUDY.

The courses of study are three: A course in agriculture, requiring four years for completion and leading to the degree of B. S. A.; a course in mechanical engineering, requiring four years for completion and leading to the degree of B. M. E.; and a four-year course in household economy (for girls) leading to the degree of B. H. E.

BOARD OF INSTRUCTION.

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| J. M. Bloss, M. A., <i>Pres.; Mental and Moral Sci.</i> | W. W. Bristow, B. A., <i>Prin. Prep. Dept.; Bookkeeping.</i> |
| J. D. Letcher, C. E., <i>Math. and Engin.</i> | J. F. Fulton, B. S., <i>Asst. Chem.</i> |
| F. Berchtold, M. A., <i>Modern Languages, Hist., Drawing, and Music.</i> | C. D. Thompson, B. A., <i>Foreman Agr. Dept.</i> |
| Margaret C. Snell, M. D., <i>Household Econ. and Hygiene.</i> | E. G. Emmett, B. M. E., <i>Instr. Mech. Drawing and Blacksmithing.</i> |
| G. A. Covell, M. E., <i>Mech. and Mech. Engin.</i> | D. W. Prichard, <i>Instr. in Woodwork.</i> |
| F. L. Washburn, B. A., <i>Zool. and Ent.</i> | H. R. Clark, <i>Instr. Printing.</i> |
| H. T. French, M. S., <i>Agr.</i> | Emile Pernot, <i>Instr. Photography and Photogravure.</i> |
| M. Craig, M. S., <i>Bot.</i> | Mrs. Ida Callahan, B. S., <i>Asst. in Prep. Dept.</i> |
| G. W. Shaw, M. A., <i>Agr. Chem.</i> | C. E. Dentler, Lieut. 11th Infantry, U. S. A., <i>Mil. Sci.; Commandant.</i> |
| J. B. Horner, M. A., <i>English.</i> | |
| George Coote, <i>Instr. Hort.</i> | |

PENNSYLVANIA.

Pennsylvania State College, *State College*.

COURSES OF STUDY.

The courses of study are as follows, each requiring four years for completion unless otherwise specified: General science course; Latin scientific course; course in agriculture; course in biology; course in chemistry; course in civil engineering; course in electrical engineering; course in mathematics; course in mechanical engineering; course in mining engineering; course in physics; a special course in chemistry, and a special course in mining engineering, each requiring two years for completion, and short courses in dairying, agriculture, and mining, each lasting twelve weeks. The four years' courses lead to the degree of B. S., the diploma containing mention of line of work pursued. Provision is also made for post-graduate study, leading to advanced degrees, and for preparatory work.

BOARD OF INSTRUCTION.

- Geo. W. Atherton, LL. D., *Pres.; Polit. and Social Sci.*
 William A. Buckhout, M. S., *Bot. and Hort.*
 I. Thornton Osmond, M. S., M. A., *Phys.*
 Harriet A. McElwain, M. A., *Lady Prin.; Hist.*
 Louis E. Reber, B. S., M. A., *Mech. and Mech. Engin.*
 William Frear, Ph. D., *Sec. Faculty; Agr. Chem.*
 Geo. G. Pond, M. A., Ph. D., *Chem.*
 Henry P. Armsby, Ph. D., *Lecturer on Animal Chem. and Cattle Feeding.*
 Edwin E. Sparks, M. A., *Prin. Prep. Dept.*
 Henry J. Waters, B. A. S., *Agr.*
 Henry T. Fernald, Ph. D., *Zool.*
 Benjamin Gill, M. A., *Latin.*
 William C. Thayer, M. A., *Modern Languages.*
 E. W. McCaskey, 1st Lieut. 21st Infantry, U. S. A., *Mil. Sci. and Tactics.*
 M. C. Ihlseng, M. E., C. E., Ph. D., *Mining Engin. and Geol.*
 J. P. Jackson, B. S., M. E., *Elect. Engin.*
 T. W. Kinkaid, U. S. N., (*Assoc.*) *Mech. Engin.*
 Fred E. Foss, C. E., *Civil Engin.*
 Joseph M. Willard, B. A., *Math.*
 Albert S. Bolles, *Econ. and Commercial Law.*
 Geo. C. Butz, M. S., *Asst. Hort.*
 H. H. Stook, B. S., M. E., (*Asst.*) *Mining Engin. and Metallurgy.*
 M. M. Garver, B. S., (*Asst.*) *Phys.*
 F. E. Tuttle, B. A., Ph. D., (*Asst.*) *Chem. and Min.*
 W. M. Towle, B. S., (*Asst.*) *Practical Mech.*
 E. W. Runkle, M. A., Ph. D., (*Asst.*) *Psych. and Ethics.*
 F. L. Pattee, M. A., (*Asst.*) *English and Rhet.*
 Jennie J. Willard, *Instr. Music.*
 T. R. Beyer, B. S., C. E., *Instr. Civil Engin.*
 Anna E. Redifer, *Instr. Industrial Art and Design.*
 M. J. Thompson, B. A., *Instr. Math.*
 J. H. Tudor, C. E., M. S., *Instr. Math.*
 Hervey E. Dunkle, B. S., *Asst. in Mech. Drawing.*
 J. A. Hunter, jr., B. S., *Instr. Mech. Engin.*
 H. A. Lardner, B. S., *Instr. Agr.*
 P. B. Breneman, B. S., *Asst. in Civil Engin.*
 W. H. Rebhun, B. S., *Asst. in Chem. Lab.*
 L. W. Mattern, B. S., *Asst. in English.*
 W. O. Farnsworth, M. A., *Asst. in French and German.*
 G. T. Sellew, M. A., *Instr. in Prep. Dept., English and Latin.*
 J. M. Wolfe, M. A., *Instr. in Prep. Dept. Math.*
 G. W. Hoskins, *Dir. Physical Training.*

RHODE ISLAND.

Rhode Island College of Agriculture and Mechanic Arts, Kingston.

COURSES OF STUDY.

Extended courses are offered in mathematics, agriculture, practical and theoretical mechanics, engineering, horticulture, botany, chemistry—general, agricultural, pharmaceutical, and organic; art, history, English, French, German, Latin, biology, and political economy.

BOARD OF INSTRUCTION.

- John H. Washburn, Ph. D., *Pres.; Chem.*
 Chas. O. Flagg, B. S., *Agr.*
 L. F. Kinney, B. S., *Hort.*
 Homer J. Wheeler, Ph. D., *Geol.*
 A. L. Bosworth, B. S., *Math.*
 E. J. Watson, M. A., *Languages.*
 Wm. E. Drake, B. S., *Mech. Engin.*
 O. C. Wiggin, M. D., *Biol.*
 H. L. Merrow, M. A., *Bot.*
 W. W. Wotherspoon, Capt. Twelfth Infantry, U. S. A., *Mil. Sci. and Tactics.*
 J. D. Towar, B. S., (*Assoc.*) *Agr.*
 Thos. C. Rodman, *Instr. Woodwork.*
 F. A. Lane, *Instr. Mech. Drawing and Surveying.*
 M. P. Helme, *Instr. Drawing.*
 A. B. Peckham, B. A., *Instr. English and Hist.*
 W. T. Lee, *Instr. Chem. and Phys.*
 Samuel Cushman, *Lecturer on Bee Keeping.*
 A. C. Scott, *Asst. Instr. Chem.*
 W. B. Madison, B. S., *Asst. Instr. Hort.*
 Geo. C. Ammonds, B. S., *Asst. Instr. Mech.*
 Geo. A. Rodman, B. S., *Asst. Instr. Mech.*
 S. W. Slocum, B. S., *Asst. Instr. Mech.*
 John F. Knowles, B. S., *Asst. Instr. Mech.*
 R. A. Wilber, B. S., *Asst. Instr. Mech.*
 Nathaniel Helme, *Met.*

SOUTH CAROLINA.

Clemson Agricultural College, *Clemson College.*

COURSES OF STUDY.

There is one course of study offered in the freshman year and two in the sophomore, junior, and senior years; one in chemistry and agriculture and the other in mechanics and engineering.

BOARD OF INSTRUCTION.

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| E. B. Craighead, <i>Pres.</i> | J. G. Clinkscales, (<i>Assoc.</i>) <i>Math.</i> |
| H. A. Strode, <i>Math.</i> | T. P. Harrison, (<i>Assoc.</i>) <i>English.</i> |
| M. B. Hardin, <i>Chem.</i> | R. N. Brackett, (<i>Assoc.</i>) <i>Chem.</i> |
| W. L. McGee, M. S., <i>Agr.</i> | J. W. Hart, (<i>Adjunct</i>) <i>Agr.</i> |
| C. M. Furman, <i>English.</i> | L. A. Clinton, (<i>Asst.</i>) <i>Agr.</i> |
| C. W. Welch, <i>Phys.</i> | William Welch, <i>Instr. Drawing.</i> |
| W. S. Morrison, <i>Hist.</i> | J. F. C. Du Pre, <i>Instr. Hort.</i> |
| T. Q. Donaldson, jr., Lieut. U. S. A., <i>Mil. Sci.</i> | W. M. Yager, <i>Instr. Drawing.</i> |
| S. Tompkins, (<i>Assoc.</i>) <i>Civil and Mech. Engin.</i> | W. F. Moncreiff, <i>Tutor English.</i> |
| | E. M. Blythe, <i>Tutor English.</i> |
| | A. Shanklin, <i>Tutor Math.</i> |

College of Agriculture and Mechanics' Institute, of Claflin University,
Orangeburg.

COURSES OF STUDY.

The regular courses of study are ten: The college classical course, requiring four years for completion, and leading to the degree of B. A.; the collegescientific course, requiring four years, and leading to the degree of B. S.; the agricultural course, requiring four years, and leading to the degree of B. S.; the preparatory classical course, preparatory scientific, preparatory agricultural, and preparatory normal courses, requiring three years each, and leading to a certificate; the higher English course, requiring two years, and leading to a certificate; the common English course, requiring six years, and leading to a certificate; instrumental music course, requiring four years, and leading to a certificate. Ten industrial courses are also provided, to be pursued in connection with the courses above.

BOARD OF INSTRUCTION.

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|--|---|
| L. M. Dunton, M. A., D. D., <i>Pres.; Agr.</i> | Mrs. C. D. Mead, <i>Lib.</i> |
| J. S. Heyward, M. A., <i>Phys. Sci.</i> | W. R. A. Palmer, D. D., <i>Greek and Lit.</i> |
| Mrs. L. M. Dunton, M. A., <i>Preceptress;</i> <i>Rhet. and Lit.</i> | Chas. H. Sears, <i>Pedagogics; Prin. English</i> <i>Schools.</i> |
| W. L. Bulkley, M. A., <i>Latin, German, and</i> <i>Lit.</i> | Joseph C. Hartzell, jr., <i>Ecol. and Min.</i> |
| Mortimer Glover, B. A., <i>Hist. and Pol. Sci.</i> | C. D. Mead, M. A., <i>V. Pres.</i> |
| P. F. Stevens, D. D., <i>Math.; Instr. English</i> <i>Bible.</i> | R. C. Bates, <i>Drawing.</i> |
| | M. Louise Linebarger, <i>Mus.</i> |

SOUTH DAKOTA.

South Dakota Agricultural College, *Brookings.*

COURSES OF STUDY.

The full courses of study are four: A course in agriculture, a course in domestic economy, a course in mechanic arts, and a course in pharmacy. The first three require four years for completion and lead to the degree of B. S.; the last requires

two years and leads to degree of Ph. G. Short two-year courses in agriculture and in mechanic arts are now offered and a one-year course in irrigation engineering. A special winter course of three months in dairying and veterinary medicine is also offered and a short course in steam engineering.

BOARD OF INSTRUCTION.

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| Louis McLouth, M. A., PH. D., <i>Pres.; Astron. and Phys.</i> | |
| Nellie E. Folsom, B. S., <i>Preceptress; Instr. Languages.</i> | A. C. Solberg, B. S., <i>Instr. Wood Shopwork and Mech. Drawing.</i> |
| J. H. Shepard, B. S., <i>Chem.</i> | H. H. Wheaton, <i>Dairy Sci.</i> |
| W. H. H. Phillips, M. A., PH. D., <i>Math.</i> | Carrie M. Barton, <i>Instr. Free-Hand Drawing and Wood Carving.</i> |
| Lilla A. Harkins, B. S., <i>Domestic Econ.</i> | Loren E. Winslow, <i>Instr. Sten. and Type-writing.</i> |
| D. A. Cormack, D. V. S., <i>Vet. Sci.</i> | C. G. Hopkins, M. S., <i>Asst. in Chem.</i> |
| E. C. Chilcott, <i>Agr.</i> | Austin B. Crane, M. S., <i>Asst. in Math.</i> |
| John M. Parkinson, M. A., LL. B., <i>Hist. and Polit. Econ.</i> | Hubert B. Bathews, B. S., <i>Asst. in Phys. and Met.</i> |
| L. C. Corbett, B. S., <i>Hort. and For.</i> | Ed. F. Hewit, <i>Sec. and Steward.</i> |
| A. S. Frost, 1st Lieut. 25th Infantry, U. S. A., <i>Mil. Sci. and Tactics.</i> | Daniel R. Willson, B. Mus., <i>Instr. in Vocal and Inst. Music.</i> |
| H. N. Ott, PH. M., <i>Zool. and Animal Pathology.</i> | Gilbert A. Young, B. S., <i>Instr. in Woodwork.</i> |
| T. A. Williams, M. S., <i>Bot. and Ent.</i> | Marcus Johnson, <i>Engin. and Steam Fitter.</i> |
| Alice E. Holt, B. L., <i>English and Phys. Culture.</i> | |
| A. W. Williams, <i>Foreman Farm.</i> | |

TENNESSEE.

State Agricultural and Mechanical College of the University of Tennessee,
Knoxville.

COURSES OF STUDY.

The courses of study are eight: Literary course, scientific course, course in agriculture, course in civil engineering, course in mechanical engineering, course in electrical engineering, course in mining engineering, and course in pedagogy. The degrees of B. A. and B. S. are conferred.

BOARD OF INSTRUCTION.

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|---|--|
| C. W. Dabney, jr., PH. D., LL. D., <i>Pres.*</i> | |
| W. W. Carson, C. E., <i>Civil Engin.</i> | Charles A. Perkins, PH. D., <i>Phys. and Elect. Engin.</i> |
| T. W. Jordan, M. A., <i>Latin.</i> | Charles W. Turner, M. A., <i>Lecturer on Hist.</i> |
| C. E. Wait, C. E., M. E., <i>Chem.</i> | J. R. McColl, B. S., <i>Supt. Shops.</i> |
| J. B. Henneman, M. A., PH. D., <i>English and German.</i> | R. L. Watts, B. A., <i>Instr. Hort.</i> |
| C. F. Vanderford, <i>Agr. and Hort.</i> | Charles Ferris, B. S., <i>Instr. in Drawing.</i> |
| L. D. Tyson, 1st Lieut. 9th Infantry, U. S. A., <i>Mil. Sci. and Tactics.</i> | S. M. Bain, B. S., <i>Instr. Bot.</i> |
| T. C. Karns, M. A., <i>Hist., Philosophy, and Pedagogy.</i> | Claude Lowry, B. S., <i>Instr. Math.</i> |
| C. D. Schmitt, M. A., <i>Math.</i> | C. E. Chambliss, M. S., <i>Instr. in Zool.</i> |
| G. F. Mellen, PH. D., <i>Greek and French.</i> | A. B. Wegener, <i>Instr. Phys. Culture.</i> |
| J. M. Black, B. A., <i>Instr. English.</i> | Edwin Wiley, B. S., <i>Lib.</i> |
| H. T. Livingston, <i>Instr. Latin and Greek.</i> | |

* On leave.

TEXAS.

State Agricultural and Mechanical College of Texas, College Station.

COURSES OF STUDY.

The courses of study are two, each extending through four years: The agricultural course, leading by specialization of studies either to the degree of B. S. H. or to the degree of B. S. A., and the mechanical course, leading in a similar way to the degree of B. C. E. or to the degree of B. M. E. Post-graduate and special courses are also provided.

BOARD OF INSTRUCTION.

L. S. Ross, *Pres.*

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|---|--|
| R. H. Whitlock, M. E., <i>Mech. Engin.</i> | W. A. Banks, (<i>Asst.</i>) <i>English and Hist.</i> |
| J. H. Connell, M. S., <i>Agr.</i> | A. M. Soule, B. S. A., (<i>Asst.</i>) <i>Agr.</i> |
| H. H. Harrington, M. S., <i>Chem. and Min.</i> | P. S. Tilson, M. S., (<i>Asst.</i>) <i>Chem.</i> |
| C. Puryear, M. A., C. E., <i>Math.</i> | R. H. Price, B. S., <i>Hort. and Bot.</i> |
| T. C. Bittle, M. A., Ph. D., <i>Languages.</i> | H. Ness, B. S., (<i>Asst.</i>) <i>Hort. and Bot.</i> |
| G. T. Bartlett, 1st Lieut. 3d Artillery, U. S. A., <i>Mil. Sci.; Commandant.</i> | D. W. Spence, B. S., C. E., (<i>Asst.</i>) <i>Civil Engin. and Phys.</i> |
| Mark Francis, D. V. M., <i>Vet. Sci.</i> | Robert T. Bray, M. E., C. E., (<i>Asst.</i>) <i>Mech. Engin.</i> |
| F. E. Giesecke, M. E., <i>Drawing.</i> | J. Clayton, (<i>Assoc.</i>) <i>Agr.</i> |
| J. C. Nagle, M. A., M. C. E., <i>Civil Engin. and Phys.</i> | A. C. Gillespie, M. D., <i>Surgeon.</i> |
| C. W. Hutson, <i>English and Hist.</i> | J. H. Carter, <i>Sec.</i> |
| R. F. Smith, (<i>Assoc.</i>) <i>Math.</i> | E. W. Hutchinson, B. C. E., <i>Bookkeeper.</i> |
| D. Adriance, M. S., (<i>Assoc.</i>) <i>Chem.</i> | Bernard Sbisá, <i>Steward.</i> |
| A. L. Banks, B. S., (<i>Adjunct</i>) <i>Math.</i> | C. A. Lewis, <i>Foreman Carpenter Shop.</i> |
| W. B. Philpott, M. S., (<i>Assoc.</i>) <i>English and Hist.</i> | J. W. Carson, B. S., <i>Foreman Farm.</i> |

Prairie View State Normal School, *Prairie View.*

COURSE OF STUDY.

The course in agriculture requires two years for completion.

BOARD OF INSTRUCTION.

S. C. Anderson, M. A., *Prin.*

Assistants.

| | |
|----------------------|-----------------------|
| C. W. Lieckie, B. A. | J. H. Reed, B. A. |
| M. H. Brogles. | Paul Bledsoe. |
| J. D. Johns. | E. A. Daule. |
| Leonora Arvy. | W. B. Woodruff, B. S. |
| E. H. Holmes. | Harriet F. Kimbro. |

UTAH.

Agricultural College of Utah, *Logan.*

COURSES OF STUDY.

The college work includes five distinctive lines of instruction: Course in agriculture, course in domestic arts, course in mechanical engineering, course in civil engineering, commercial course. There are three special courses: A two years' course in agriculture, a two years' course in domestic arts, a course in irrigation engineering, and a preparatory department. In addition to these special courses there have been organized two courses of winter lectures covering ten weeks each: A course of agricultural lectures and a course of lectures for the domestic arts department.

BOARD OF INSTRUCTION.

- Joshua H. Paul, PH. B., *Pres.*: *Mental, Moral, and Polit. Sci.*
 E. S. Richman, M. S. A., *Hort. and Bot.* Mrs. E. J. MacEwan, B. S., *Instr. Sewing.*
 J. M. Sholl, B. M. E., *Mech. Engin.* Clare Kenyon, *Elocution; Lib.*
 J. T. Caine, jr., *Instr. Prep. Dept.* F. W. Brewer, M. A., M. D., *Biol.*
 A. A. Mills, B. S., *Agr.* J. W. Mayo, *Shopwork and Drawing.*
 S. S. Twombly, M. S., D. V. S., *Chem. and* H. D. Styer, 1st Lieut. 13th Infantry,
Vet. Sci. U. S. A., *Mil. Sci. and Math.*
 F. B. Linfield, B. S. A., *Animal Husbandry* S. Fortier, B. S. A., C. E., *Civil and Hy-*
and Dairying. *draulic Engin.*
 J. E. Shepard, *Prin. Commercial Dept.* W. S. Langton, *Instr. Prep. Dept.*
 Mrs. S. W. Eddy, *Instr. Prep. Dept.* J. A. Widtsoe, B. S., *Phys. and Min.*
 E. J. MacEwan, M. A., *English and Modern* Dalinda Cotey, M. S., *Domestic Econ.*
Languages. Karl Schaub, *Free-Hand Drawing.*
 James Dryden, *Instr. Commercial Dept.* W. Fogelberg, *Instrumental Music.*

VERMONT.

University of Vermont and State Agricultural College, Burlington.

COURSES OF STUDY.

In the department of agriculture the courses of study are four; the agricultural course requiring four years and leading to a degree; the short course in agriculture requiring two years; the special course of one year, and the dairy-school course occupying four weeks.

BOARD OF INSTRUCTION.

- M. H. Buckham, D. D., *Pres.*: *Polit. and Social Philosophy.*
 V. G. Barbour, PH. B., C. E., *Civil Engin.* A. A. Brigham, B. S., *Agr.*
 G. H. Perkins, PH. D., *Natural Hist.* L. J. Huff, *Modern Languages.*
 Fredk. Tupper, PH. D. *English Language* H. E. Tutherly, Capt. 1st Cavalry, U. S. A.,
and Lit. and Elocution. *Mil. Tactics.*
 N. F. Merrill, PH. D., *Chem.* A. W. Slocum, *Instr. Math. and Phys.*
 A. L. Daniels, D. S., *Math. and Phys* L. R. Jones, PH. B., *Bot.*
 J. W. Votey, C. E., *Civil Engin.* J. L. Hills, B. S., *Agr. Chem.*
 Horatio Loomis, D. Sc., *Min.* A. W. Ayer, *Mech. Engin.*
 H. B. Chittenden, M. A., *Instr. English.* F. A. Rich, *Instr. Vet. Sci.*
 W. E. Simpson, *Dairying.*

VIRGINIA.

Virginia Agricultural and Mechanical College, Blacksburg.

COURSES OF STUDY.

The courses of study are seven, each requiring four years for completion and leading to the degree of B. S.: Agricultural course, horticultural course, applied chemistry course, general science course, civil engineering course, mechanical engineering course, and electrical engineering course. There are also two courses which require two years for completion and lead to a certificate of practical agriculture and practical mechanics.

BOARD OF INSTRUCTION.

J. M. McBryde, Ph. D., LL. D., *Pres.: Agr. Chem.*

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| W. B. Alwood, <i>Hort., Ent., and Myc.</i> | R. J. Davidson, M. A., <i>Anal. Chem.</i> |
| E. E. Sheib, Ph. D., <i>English, Hist., and Polit. Econ.</i> | E. P. Niles, D. V. M., <i>Vet. Sci.</i> |
| E. A. Smyth, jr., M. A., <i>Biol.</i> | W. W. Hurt, <i>Sec.; Instr. Math. and Book-keeping.</i> |
| T. P. Campbell, M. A., <i>Modern Languages.</i> | C. G. Porcher, B. S., <i>Instr. Forge Work.</i> |
| S. R. Pritchard, M. A., (<i>Adjunct</i>) <i>Phys. and Elect. Engin.</i> | J. R. Parrott, <i>Instr. Woodwork.</i> |
| R. C. Price, <i>Chem., Min., and Geol.</i> | T. L. Watson, <i>Instr. Min. and Geol.</i> |
| D. O. Nourse, B. S., <i>Agr.</i> | J. Garduer, <i>Treas.</i> |
| S. M. Barton, Ph. D., <i>Math. and Civil Engin.</i> | P. C. Hubbard, <i>Instr. Machine Work.</i> |
| D. O. Shanks, 1st Lieut. 18th Infantry, U. S. A., <i>Mil. Sci. and Tactics: (Asst.) Math. and Phys.</i> | A. W. Drinkard, B. S., <i>Asst. in English and Hist.</i> |
| L. S. Randolph, M. E., <i>Mech. Engin.</i> | J. F. Strauss, B. S., <i>Asst. in Hort.</i> |
| R. P. Whittle, B. S., <i>Asst. in Elect. Engin.</i> | J. W. Stull, B. S., <i>Asst. in Math.</i> |
| | R. E. Wright, B. S., <i>Asst. in Mech. Engin.</i> |
| | F. D. Wilson, B. S., <i>Asst. in Chem.</i> |

Hampton Normal and Agricultural Institute, Hampton.

COURSE OF STUDY.

The course of study requires three years for completion and diploma is given on graduation.

BOARD OF INSTRUCTION.

H. B. Frissell, D. D., *Prin.: Mental Philosophy.*

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| H. B. Turner, <i>Pastor: Bible Lessons.</i> | Catherine Condell, <i>Training.</i> |
| Geo. F. Peabody, <i>Treas. (New York).</i> | Jessie F. Andrus, <i>Grammar and Physiol.</i> |
| F. Chichester, <i>Asst. Treas. (Hampton).</i> | Mary R. Hamlin, <i>Geography.</i> |
| F. C. Briggs, <i>Business Agent.</i> | Cora Moore, <i>English.</i> |
| Albert Howe, <i>Supt. of Industries.</i> | Mary Gray Clark, <i>English.</i> |
| Martha M. Waldron, M. D., <i>Resident Physician.</i> | Emma Johnston, <i>Arithmetic.</i> |
| Leonora E. Herron, <i>Lib.</i> | Mary W. Nettleton, <i>Methods.</i> |
| Emily Herron, <i>Asst. Lib.</i> | Mary Ellery, <i>Drawing.</i> |
| Elizabeth Clark, <i>Lady Prin.; Math.</i> | Annie Beecher Scoville, <i>Bible and Hist.</i> |
| Elizabeth Hyde, <i>in Charge of Academic Dept.</i> | Bernette Bachelder, <i>Arithmetic.</i> |
| Josephine E. Richards, <i>in Charge of Indian Dept.</i> | Bessie Cleveland, <i>Music.</i> |
| C. L. Goodrich, <i>Agr.</i> | Flora F. Lowe, <i>Arithmetic and Grammar.</i> |
| C. C. Tucker, <i>Manual Training.</i> | C. Gussie Adams, <i>Reading, Language, and Arithmetic.</i> |
| Helen W. Ludlow, <i>Rhet. and Composition.</i> | Alice I. Boardman, <i>Reading and Arithmetic.</i> |
| Dora Freeman, <i>Reading and Lit.</i> | Fannie S. Hillard, <i>Reading and Arithmetic.</i> |
| Myrtilla J. Sherman, <i>Grammar and Composition.</i> | Marian Metcalf, <i>Bible and Reading.</i> |
| Jane E. Davis, <i>Science.</i> | Grace Nettleton, <i>Sci. and Language.</i> |
| Jane S. Worcester, <i>Hist. and Geography.</i> | Grace E. Howes, <i>Phys. Culture.</i> |
| Alice M. Bacon, <i>Civil Government and Polit. Econ.</i> | M. A. Price, Clara Snow, Louise Cleaveland, and Ora Brown, <i>Indian teachers (distinctively).</i> |

WASHINGTON.

Washington Agricultural College and School of Science, Pullman.

COURSES OF STUDY.

Courses of study are offered in the following lines: Mathematics, civil engineering, mining engineering, chemistry, botany and zoology, agriculture, horticulture, English language and literature, economic science and history, electrical engineering, steam engineering, hydraulic engineering, mill engineering, military science and tactics; and supplemental courses in German, French, Latin, and physics.

BOARD OF INSTRUCTION.

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| E. A. Bryan, M. A., <i>Pres.</i> ; <i>Hist. and Polit. Sci.</i> | |
| Nancy L. Van Doren, <i>Preceptress and Lib.</i> ; | O. L. Waller, Ph. M., <i>Math. and Civil Engin.</i> |
| C. V. Piper, M. S., <i>Bot. and Zool.</i> | Elton Fulmer, M. A., <i>Chem.</i> |
| W. J. Spillman, M. S., <i>Agr.</i> | F. T. Dow, B. M. E., <i>Foreman Mech. Engin. Shops and Shop Practice.</i> |
| Geo. E. Stockle, 2d Lieut. 10th Cavalry, U. S. A., <i>Mil. Sci. and Tactics.</i> | G. H. Watt, B. S., <i>Prin. Prep. Dept.</i> |
| John A. Balmer, <i>Hort. and For.</i> | Annie Howard, (<i>Asst.</i>) <i>English Language and Lit.</i> |
| A. R. Saunders, M. E., <i>Mech. Engin. and Phys.</i> | C. C. Fletcher, <i>Asst. in Chem.</i> |

WEST VIRGINIA.

West Virginia University, Morgantown.

COURSES OF STUDY.

The courses of study are five, each requiring four years for completion: Classical course, leading to the degree of B. A.; scientific course, leading to the degree of B. S.; course in mechanical engineering, leading to the degree of B. S. M. E.; course in civil engineering, leading to the degree B. S. C. E.; and course in agriculture, leading to the degree of B. Agr. There is also a department of law, in which the degree of LL. B. is given. Post-graduate work and preparatory work are also provided.

BOARD OF INSTRUCTION.

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The courses of study are three: A course in agriculture, requiring three years for completion; a mechanical course; and a normal course.

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COURSES OF STUDY.

The long course requires four years, leading to the degree of B. Agr. The short course in agriculture lasts two terms of twelve weeks each. The dairy course requires twelve weeks' attendance, with two seasons' actual practice in factory, on satisfactory completion of which a dairy certificate is granted.

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WYOMING.

College of Agriculture of the University of Wyoming, Laramie.

COURSE OF STUDY.

The course of study in the department of agriculture requires four years for completion and leads to the degree of B. Agr.

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LIST OF STATION PUBLICATIONS RECEIVED AT THE OFFICE OF EXPERIMENT STATIONS DURING 1894.*

ALABAMA COLLEGE STATION.

| Date. | Publication. | Title. |
|---------------|------------------|--|
| 1893. | | |
| October..... | Bulletin 51..... | Vegetables. |
| | Annual Report.. | Sixth Annual Report, 1893. |
| 1894. | | |
| January..... | Bulletin 52..... | Corn and Cotton. |
| January..... | Bulletin 53..... | A New Milk or Water Sterilizer. |
| February..... | Bulletin 54..... | Tobacco. |
| April..... | Bulletin 55..... | A New Disease of Cotton—Cotton-Boll Rot. |
| May..... | Bulletin 56..... | Experiments in Crossing for the Purpose of Improving the Cotton Fiber. |
| May..... | Bulletin 57..... | Fertilizers Required by Cotton as Determined by the Analysis of the Plant. |

ARIZONA STATION.

| | | |
|--------------|------------------|---|
| 1893. | | |
| November ... | Bulletin 9..... | Insects and Insecticides. |
| December ... | Bulletin 10..... | Experimental Work at Willcox. |
| December ... | Bulletin 11..... | Pumping Water for Irrigation. |
| | Annual Report. | Financial Report, 1893. |
| 1894. | Series II. | |
| June 30..... | Bulletin 1..... | Preliminary Report of Observations on the "Crown-Knot." |

ARKANSAS STATION.

| | | |
|--------------|------------------|--|
| 1893. | | |
| December.... | Bulletin 25..... | Unsound Corn and Forage as a Cause of Disease in Live Stock. Colics in Horses and Mules. Some Further Experiments with Cattle. Texas Fever. |
| | Annual Report . | Sixth Annual Report, 1893. |
| 1894. | | |
| January..... | Bulletin 26..... | Spraying Apple Trees. Spraying for Apple Scab. Spraying for Bitter Rot. Prevalence in the State of Apple Scab and Bitter Rot. Varieties of Apples in the State Reported as Surest Bearers. Some Apples Adapted to all Sections of the State. Arkansas Seedling Apples. |
| March..... | Bulletin 27..... | Late Crops for Overflow Lands. Corn: Varieties for all Sections of the State. Corn Culture. Rotation of Crops. Cotton: Egyptian Varieties. Cotton Culture. Stack Frame for Curing and Storing Cowpea Hay. Cowpea Hay. Forage Plants. Oats for Hay. |
| June..... | Bulletin 28..... | Rye for Green Winter Feeding. Fertilizer Experiments with Rye. Onions from Seed. Salsify, or Oyster Plant. Fall-Raised Irish Potatoes. Preparation of Soil for Cotton. Bermuda Grass. Pocket Gopher. Moles. |
| July..... | Bulletin 29..... | Wheat Experiments on Sandy Loam Soil at Newport Substation. Some Grass Experiments on Clay Loam Soil at Fayetteville. |
| September... | Bulletin 30..... | Feeding Standards. Some Arkansas Stock Foods. Compounding Rations. |
| | Annual Report . | Seventh Annual Report, 1894. |

CALIFORNIA STATION.

| | | |
|--------------|-------------------|--|
| 1893. | | |
| December 15. | Bulletin 103..... | Distribution of Seeds and Plants. |
| 1894. | | |
| April..... | Bulletin 104..... | Investigations of California Olives and Olive Oils. |
| October..... | Bulletin 105..... | The Cabaigre, or Tanners' Dock. Australian Salt Bush for Alkali Soils. |
| December.... | Bulletin 106..... | Distribution of Seeds, Plants, and Scions. |

* A list of publications issued by the stations prior to January 1, 1892, was published in the Experiment Station Record, Vol. III, p. 937, and a list of those issued during 1892 and 1893 in Bulletin 19 of the Office of Experiment Stations, p. 61.

COLORADO STATION.

| Date. | Publication | Title |
|------------------|-----------------------|---|
| 1892. | | |
| 1893. | Annual Report . | Fifth Annual Report, 1892. |
| 1894. | Annual Report . | Sixth Annual Report, 1893. |
| February | Bulletin 20 | Farm Notes for 1893. Garden Notes for 1893. Seeding, Tillage, and Irrigation. |
| August | Bulletin 27 | The Measurement and Division of Water. |
| September . . . | Bulletin 28 | The Russian Thistle. |

CONNECTICUT STATE STATION.

| | | |
|-------------------|------------------------|--|
| 1893. | | |
| 1894. | Annual Report . | Seventeenth Annual Report, 1893. |
| January | Bulletin 117 | The Babcock Method of Determining Fat in Milk and Milk Products. A Provisional Bibliography of the More Important Works Published by the U. S. Department of Agriculture and the Agricultural Experiment Stations of the United States from 1886 to 1893 inclusive, on Fungus and Bacterial Diseases of Economic Plants. |
| March | Bulletin 118 | |
| May | Bulletin 119 | |
| | | The Babcock Test as a Basis for Payment in Cream-gathering Creameries. |

CONNECTICUT STORRS STATION.

| | | |
|-------------------|-----------------------|--|
| 1893. | | |
| 1894. | Annual Report . | Sixth Annual Report, 1893. |
| February | Bulletin 12 | The Ripening of Cream by Artificial Bacteria Cultures. Rations Fed to Milch Cows in Connecticut. |
| October | Bulletin 13 | |

DELAWARE STATION.

| | | |
|------------------|-----------------------|---|
| 1892. | | |
| 1893. | Annual Report . | Fifth Annual Report, 1892. |
| December | Bulletin 22 | The Preparation of Ammoniacal Solution of Copper Carbonate. |
| 1894. | | |
| March | Bulletin 23 | |
| July | Bulletin 24 | Texas Fever. Strawberries: Test of Varieties. |

FLORIDA STATION.

| | | |
|-------------------|-----------------------|---|
| 1893. | | |
| October | Bulletin 21 | The Tomato and Some of Its Diseases. |
| November | Bulletin 22 | Fertilizers: How to Make and How to Use Them. |
| December | Bulletin 23 | Insecticides and Fungicides. |
| 1894. | | |
| January | Bulletin 24 | Annual Report, 1893. |

GEORGIA STATION.

| | | |
|--------------------|-----------------------|---|
| 1893. | | |
| October | Bulletin 22 | Manures and Fertilizers. |
| December | Bulletin 23 | Fertilizer Culture and Variety Experiments on Corn. Fertilizer and Variety Tests on Field Peas. |
| | Annual Report . | Sixth Annual Report, 1893. |
| 1894. | | |
| February | Bulletin 24 | Variety, Fertilizer, and Culture Experiments on Cotton. Cotton Crosses and Hybrids. |

IDAHO STATION.

| Date. | Publication. | Title. |
|-----------------------|-----------------|---|
| 1893. October..... | Bulletin 5..... | The Relation of Meteorology to the Agricultural Interests of Idaho. |
| 1894. January..... | Bulletin 6..... | First Annual Report, 1893. |
| April..... | Bulletin 7..... | Insecticides and Spraying. |
| July..... | Bulletin 8..... | Water and Water Analyses. |

ILLINOIS STATION.

| | | |
|-----------------------|------------------|---|
| 1893. December.... | Bulletin 28..... | Grapes: Test of Varieties. A Grape Disease. Grapes: Method of Training. |
| December.... | Bulletin 29..... | Orange Rust in Raspberries and Blackberries. A New Factor in Scientific Agriculture. |
| 1894. March..... | Annual Report . | Sixth Annual Report, 1893. |
| March..... | Bulletin 30..... | Blackberries and Raspberries: Variety Tests and Management. |
| April..... | Bulletin 31..... | Corn and Oats Experiments, 1893. |
| June 9..... | Bulletin 32..... | An Acid Test of Cream. |
| August..... | Bulletin 33..... | The Chinch Bug in Illinois, 1894. Alkaline Tablets for Testing the Acidity of Cream. Certified Tests of Dairy Cows. |
| August..... | Bulletin 34..... | Experiments with Wheat, 1893-94. Experiments with Oats, 1894. |
| August..... | Bulletin 35..... | The Russian Thistle in Illinois. |
| August..... | Bulletin 36..... | Stock Feeding in Illinois. Index to Bulletins 17 to 36. |
| | Annual Report . | Seventh Annual Report, 1894. |

INDIANA STATION.

| | | |
|-----------------------|------------------|--|
| 1893. January..... | Annual Report . | Sixth Annual Report, 1893. |
| 1894. March..... | Bulletin 48..... | Experiments with Small Fruits. |
| March..... | Bulletin 49..... | Sugar Beets. |
| April..... | Bulletin 50..... | Field Experiments with Corn and Oats. |
| August..... | Bulletin 51..... | Field Experiments with Wheat. Forms of Nitrogen for Wheat. |
| November... | Bulletin 52..... | Wild, or Prickly, Lettuce. |

IOWA STATION.

| | |
|---------------------------|---|
| 1893. Bulletin 22..... | A Study in Churning. Composite Samples at the Creamery: Chromate Preservatives. Rennet Extracts of Commerce. The Use of Sand Cherries for Stocks. Rose Hybrids. |
| Bulletin 23..... | Soiling. A Study of Ripening Corn. Notes on Injurious Insects. Results of Crossing Cucurbits. Notes on a few Common Fungus Diseases. Sugar Beets in Iowa. Rainfall Record. |
| 1894. Bulletin 24..... | Steer and Heifer Beef. Changes during Cheese Ripening. Experiments with Fungicides. Corn Insects: Their Injuries and How to Treat Them. Index to Volume II, Bulletins 13 to 24, inclusive. |
| Bulletin 25..... | Feeding Winter Dairy Cows. Calf Feeding. Specific Gravity and Weight of Wheat Seed. Report on Separators. Creaming by Gravity. Corn Meal vs. Grass with Stock Steers. Actinomycosis and the Iodid Treatment. Rainfall Record. |
| Bulletin 26..... | The Russian Thistle. |

KANSAS STATION.

| | | |
|-----------------------|------------------|---|
| 1893. December.... | Bulletin 41..... | The Effect of Fungicides upon the Germination of Corn. |
| December.... | Bulletin 42..... | Experiments with Oats. |
| December.... | Bulletin 43..... | Experiments with Sorghum and Sugar Beets. |
| December.... | Bulletin 44..... | Further Study of Native Grapes. |
| December.... | Bulletin 45..... | Experiments with Corn. |
| | Annual Report . | Sixth Annual Report, 1893. |
| 1894. May..... | Bulletin 46..... | Rusts of Grain, II. |
| August..... | Bulletin 47..... | Experiments with Wheat. Experiments in Feeding Steers, III. |

KENTUCKY STATION.

| Date | Publication. | Title. |
|--------------|------------------|--|
| 1890. | Annual Report | Third Annual Report 1890. |
| 1891. | Annual Report | Fourth Annual Report, 1891. |
| 1892. | Annual Report | Fifth Annual Report, 1892. |
| 1893. | Bulletin 47..... | The Pests of Shade and Ornamental Trees. An Experiment on "Palm Rot." |
| December | Annual Report | Sixth Annual Report, 1893. |
| 189 | Bulletin 48..... | Commercial Fertilizers. |
| January..... | Bulletin 49..... | Destructive Locusts in Kentucky. The Bud Worm of Tobacco. |
| March..... | Bulletin 50..... | Fruit Growing in Kentucky. Notes upon Vegetables. |
| April..... | Bulletin 51..... | Commercial Fertilizers. |
| August..... | | |

LOUISIANA STATIONS.

| | | |
|-------|------------------------------------|--|
| 1893. | Second Series. Bulletin 23..... | Analyses of Commercial Fertilizers and Other Substances Useful to Agriculture. |
| | Annual Report | Sixth Annual Report, 1893. |
| 1894 | Bulletin 24..... | Sugar Cane: Field Experiments—Physical and Physiological. |
| | Bulletin 25..... | Tobacco. |
| | Bulletin 26..... | Sugar Cane. Field Experiments—Varieties of Cane, and Striped or Purple. |
| | Bulletin 27..... | Horticulture: Results of the Year 1893. |
| | Bulletin 28..... | Report of the Farm, 1893. Report of the Veterinarian. Report of the Entomologist. |
| | Bulletin 29..... | Report of Results for 1893 at Calhoun, Louisiana. |
| | Bulletin 30..... | Sweet Potatoes. |
| | Bulletin 31..... | Domestic and Commercial Fertilizers—Results of Five Years with Our Staple Crops. |

MAINE STATION.

| | | |
|-------------------|------------------|--|
| 1893. | Annual Report | Annual Report, 1893. |
| 1894. | Second Series. | |
| January 2..... | Bulletin 5..... | Waste of Fat in Skimmed Milk by the Deep-Setting Process. |
| January 8..... | Bulletin 6..... | Fruit Culture: Varieties. |
| February 15..... | Bulletin 7..... | Inspection of Fertilizers. |
| March 1..... | Bulletin 8..... | Spraying Experiments. |
| March 15..... | Bulletin 9..... | Tomatoes. |
| April 1..... | Bulletin 10..... | Cauliflowers. |
| April 2..... | Bulletin 11..... | Corn as a Silage Crop. |
| May 1..... | Bulletin 12..... | Potatoes: A Comparison of the Trench System with Ordinary Culture. |
| June 1..... | Bulletin 13..... | The Suppression of Bovine Tuberculosis and Glanders. |
| September 15..... | Bulletin 14..... | Inspection of Fertilizers. |

MARYLAND STATION.

| | | |
|----------------|------------------|---|
| 1893. | | |
| December..... | Bulletin 23..... | Injurious Insects of Maryland. |
| | Annual Report | Sixth Annual Report, 1893. |
| 1894 | | |
| February..... | Bulletin 24..... | Composition of Commercial Fertilizers sold in this State. |
| March..... | Bulletin 25..... | Corn, Potatoes, Tomatoes, Strawberries, Grapes, etc. |
| June..... | Bulletin 26..... | Tobacco. |
| August..... | Bulletin 27..... | Composition of Commercial Fertilizers Sold in this State. |
| September..... | Bulletin 28..... | Experiments with Wheat and Barley. |

MASSACHUSETTS STATE STATION.

| Date. | Pnblication. | Title. |
|--------------|------------------|---|
| 1893. | Annual Report. | Eleventh Annual Report, 1893. |
| 1894. | | |
| March..... | Bulletin 51..... | General Discussion on Commercial Fertilizers. Analysis of Fodder Articles. |
| June..... | Bulletin 52..... | Meteorological Summary for Five Months Ending May 31, 1894. Analyses of Commercial Fertilizers Collected During 1894. |
| July..... | Bulletin 53..... | Meteorological Summary for June, 1894. Analyses of Commercial Fertilizers Collected During 1894. |
| August..... | Bulletin 54..... | Meteorological Summary for July, 1894. Analyses of Commercial Fertilizers Collected During 1894. |
| October..... | Bulletin 55..... | Meteorological Summary for August and September, 1894. Analyses of Commercial Fertilizers Collected During 1894. |
| November... | Bulletin 56..... | Meteorological Summary for October, 1894. Analyses of Commercial Fertilizers Collected During 1894. |

MASSACHUSETTS HATCH STATION.

| | | |
|------------------------|---------------------------|---|
| 1893. | | |
| October..... | Bulletin 22..... | Report on Fruits. |
| December..... | Bulletin 23..... | Electro-Culture. |
| December..... | Meteorological Bulletin. | Meteorological Bulletin 60. |
| 1894. | | |
| January..... | Special Bulletin. | Green Manuring. |
| April..... | Bulletin 24..... | Insecticides. The Horn Fly. |
| April..... | Bulletin 25..... | Fungicides and Insecticides. Tests of Grapes. |
| October..... | Bulletin 26..... | Strawberries. Blackberries. Raspberries. |
| January-No- vember. | Meteorological Bulletins. | Meteorological Bulletins 61 to 71. |

MICHIGAN STATION.

| | | |
|--------------|-------------------|--|
| 1893. | | |
| August..... | Bulletin 100..... | Eighty New Strawberries. |
| December 1.. | Bulletin 101..... | Composition of Wheat and Straw. Composition of Certain Forage Plants. Adulteration of Ground Feed. Mineral Residues in Sprayed Fruits. |
| December 1.. | Bulletin 102..... | Insects Injurious to Celery. |
| 1894. | | |
| February.... | Bulletin 103..... | Peach and Plum Culture in Michigan. |
| February.... | Bulletin 104..... | A Year Among Fruits. |
| February.... | Bulletin 105..... | Michigan Fruit List. |
| February.... | Bulletin 106..... | Strawberries and Raspberries. |
| February.... | Bulletin 107..... | Fattening Lambs. |
| February.... | Bulletin 108..... | Potatoes and Potato Scab. |
| February.... | Bulletin 109..... | Variety Tests of Vegetables. |
| February.... | Bulletin 110..... | The External Conformation of the Horse. |
| July..... | Bulletin 111..... | The Cultivated Raspberries of the United States. |
| June..... | Bulletin 112..... | Fertilizer Analyses. |
| October..... | Bulletin 113..... | Fattening Lambs. |
| October..... | Bulletin 114..... | Rape as a Forage Plant. |
| October..... | Bulletin 115..... | Management of Swamp Lands. |
| October..... | Bulletin 116..... | Insects of the Clover Field. |
| December... | Bulletin 117..... | Millet. |

MINNESOTA STATION.

| | | |
|--------------|------------------|---|
| 1893. | | |
| December... | Bulletin 29..... | Wheat: Heavy and Light Weight Seed Wheat; the Vigor of Growth of the Wheat Plant; the Draft of the Wheat Plant upon the Soil in Different Stages of its Growth. |
| December... | Bulletin 30..... | Soils: The Composition of Native and Cultivated Soils, and the Effects of Continuous Cultivation upon their Fertility. |
| December... | Bulletin 31..... | Practical Rations for Lambs. Lambs <i>vs.</i> Wethers for Fattening. Valuation of Wheat Screenings. Field Experiments. Varieties of Wheat, Oats, and Corn. Methods of Planting Oats, Wheat, and Potatoes. Depth to Sow Oats and Wheat, and Time to Sow. Heavy <i>vs.</i> Light Oats for Seed. Methods of Preparing Land for Oats. |
| December... | Bulletin 32..... | Late Blight and Rot of the Potato. Potato Scab. Cross Fertilization of Grapes. Conservation of Moisture in Soil. Fruits: Notes on Varieties. |
| | Annual Report. | Annual Report, 1893. |
| 1894. | | |
| July..... | Bulletin 33..... | The Russian Thistle or Russian Tumble Weed. |
| September... | Bulletin 34..... | The Chemical Development and Value of Red Clover. The Russian Thistle: Its Food Value and Draft upon the Soil. |

MISSISSIPPI STATION.

| Date | Publication | Title |
|--------------------------|--|--|
| 1893. November . . . | Bulletin 27 Annual Report . . | Insecticides and their Application. Sixth Annual Report, 1893. |
| 1894. January | Bulletin 28 | The Horn Fly. |
| May | Bulletin 29 | Exhaustion and Restoration of Soil Fertility. Fertilizers and their Use. |
| May | Bulletin 30 | A Kerosene Attachment for Kuapsack Pumps. |

MISSOURI STATION.

| | | |
|--------------------------|---------------------|---------------------------------|
| 1892. October | Bulletin 19 | Soils and Fertilizers, Part I. |
| 1893. January | Bulletin 20 | Soils and Fertilizers, Part II. |
| July | Bulletin 22 | Seedling Strawberries. |
| October | Bulletin 23 | Grape Culture. |

MONTANA STATION.

| | | |
|--------------------------|----------------------|-----------------------------------|
| 1894. March | Bulletin 1 | Organization; Announcements. |
| May | Bulletin 2 | Smuts of Wheat, Oats, and Barley. |
| June | Bulletin 3 | Pig Feeding. |

NEBRASKA STATION.

| | | |
|---------------------------|--|--|
| 1893. December 20 . . | Bulletin 31 Annual Report . . | The Russian Thistle in Nebraska. Seventh Annual Report, 1893. |
| 1894. February 7 . . . | Bulletin 32 | Wheat and Some of its Products. |
| April 16 | Bulletin 33 | Meteorological Observations for 1893. |
| May 1 | Bulletin 34 | Chinch Bugs. |
| May 1 | Bulletin 35 | Alfalfa. Farm Notes. |
| May 1 | Bulletin 36 | Experiments in the Culture of the Sugar Beet in Nebraska. |

NEVADA STATION.

| | | |
|---------------------------|---------------------|----------------------------|
| 1893. December | Bulletin 22 | Nevada Weeds, II. |
| December | Bulletin 23 | Sugar Beets. |
| | Annual Report . . | Sixth Annual Report, 1893. |

NEW HAMPSHIRE STATION.

| | | |
|---------------------------|---------------------|--|
| 1892. November . . . | Bulletin 18 | Effect of Food on Milk. |
| 1894. February | Bulletin 19 | Spraying Apples and Pears against Fungi. |
| March | Bulletin 20 | Effect of Food on Milk: Feeding with Fats. |
| April | Bulletin 21 | Farmyard Manures and Artificial Fertilizers. |

NEW JERSEY STATIONS.

| | | |
|----------------------------|---|---|
| 1893. December 9 . . . | Bulletin 98 Annual Reports . . | Club Root of Cabbage and Its Allies. Fourteenth Annual Report of the State Station and Sixth of the College Station, 1893. |
| 1894. April 4 | Bulletin 99 | The Pear Midge. |
| June 11 | Bulletin 100 | Crimson, or Scarlet, Clover: Its Growth, Composition and Useful Uses. |
| July 2 | Bulletin 101 | The Use of Koch's Lymph in the Diagnosis of Tuberculosis of Cattle. |
| July 30 | Bulletin 102 | Analyses of Fertilizing Materials and House Mixtures. The Experiences of Farmers with House Mixtures. |
| October 8 | Bulletin 103 | Some Insects Injurious to Shade Trees. |

NEW MEXICO STATION.

| Date. | Publication. | Title. |
|------------------------|------------------|---|
| 1893. September.... | Bulletin 10..... | Insects of 1893: The Army Worm; The San José Scale; The Cochineal Insect; The Cottony Scale of the Osage Orange; Miscellaneous Insects. |
| October..... | Bulletin 11..... | Notes on Cañagre. Meteorological Data and Deductions. |
| November.... | Bulletin 12..... | The Value of Rio Grande Water for the Purpose of Irrigation. |
| | Annual Report. | Fourth Annual Report, 1893. |

NEW YORK STATE STATION.

| | | |
|---------------|------------------|--|
| 1892. | Annual Report. | Eleventh Annual Report, 1892. |
| 1893. | New Series. | |
| May..... | Bulletin 54..... | Experiments in the Manufacture of Cheese: Manufacture of Cheese from Normal Milk Rich in Fat; Study of Cheese-Ripening Process. |
| May..... | Bulletin 55..... | General Principles Relating to the Composition and Use of Fertilizers. |
| May..... | Bulletin 56..... | Experiments in the Manufacture of Cheese: The Manufacture of Edam Cheese; The Manufacture of Gouda Cheese. |
| June..... | Bulletin 57..... | Feeding Experiments with Laying Hens. Keeping Males with the Laying Stock. Observations on Feather Eating. General Observations. |
| July..... | Bulletin 58..... | Analyses of Commercial Fertilizers Collected in Long Island in the Spring of 1893. |
| September.... | Bulletin 59..... | Analyses of Commercial Fertilizers Collected in the Spring of 1893. |
| October..... | Bulletin 60..... | Investigations Relating to the Manufacture of Cheese, Part I. |
| November.... | Bulletin 61..... | Investigations Relating to the Manufacture of Cheese, Part II. |
| December.... | Bulletin 62..... | Investigations Relating to the Manufacture of Cheese, Part III. |
| December.... | Bulletin 63..... | Some Experiences with Blackberries, Dewberries, and Raspberries. |
| | Annual Report. | Twelfth Annual Report, 1893. |
| 1894. | | |
| January..... | Bulletin 64..... | Some Experiences with Strawberries. Strawberry Crosses. |
| January..... | Bulletin 65..... | Investigations Relating to the Manufacture of Cheese, Part IV. |
| January..... | Bulletin 66..... | Analyses of Commercial Fertilizers Collected in the Fall of 1893. |
| February..... | Bulletin 67..... | Experiments in Preventing Pear Scab in 1893. |
| March..... | Bulletin 68..... | Investigations Relating to the Manufacture of Cheese, Part V. |
| March..... | Bulletin 69..... | Vegetables Grown for Exhibition. |
| April..... | Bulletin 70..... | Some Reasons why the Legal Milk Standard of New York State Should be Changed. |
| May..... | Bulletin 71..... | Some Reasons why there Should be a Legal Standard for Cheese in New York State. |
| June..... | Bulletin 72..... | Preventing Leaf Blight of Plum and Cherry Nursery Stock. |
| July..... | Bulletin 73..... | Analyses of Commercial Fertilizers Collected during the Spring of 1894. |

NEW YORK CORNELL STATION.

| | | |
|---------------|------------------|--|
| 1892. | Annual Report. | Fifth Annual Report, 1892. |
| 1893. | | |
| November.... | Bulletin 59..... | Does Mulching Retard the Maturity of Fruits? |
| December.... | Bulletin 60..... | The Spraying of Orchards. |
| December.... | Bulletin 61..... | Sundry Investigations of the Year. |
| | Annual Report. | Sixth Annual Report, 1893. |
| 1894. | | |
| January..... | Bulletin 62..... | The Japanese Plums in North America. |
| March..... | Bulletin 63..... | Cooperative Test of Sugar Beets. |
| March..... | Bulletin 64..... | On Certain Grass-Eating Insects. |
| April..... | Bulletin 65..... | Tuberculosis in Relation to Animal Industry and Public Health. |
| May..... | Bulletin 66..... | Test of Cream Separators. |
| June..... | Bulletin 67..... | Some Recent Chinese Vegetables. |
| August..... | Bulletin 68..... | The Cultivated Poplars; with Remarks upon the Planting of Grounds. |
| August..... | Bulletin 69..... | Hints on the Planting of Orchards. |
| August..... | Bulletin 70..... | The Native Dwarf Cherries. |
| August..... | Bulletin 71..... | Apricot Growing in Western New York. |
| September.... | Bulletin 72..... | The Cultivation of Orchards. |
| September.... | Bulletin 73..... | Leaf Curl and Plum Pockets. |
| October..... | Bulletin 74..... | Impressions of the Peach Industry in Western New York. |
| October..... | Bulletin 75..... | Peach Yellows. |
| November.... | Bulletin 76..... | Some Grape Troubles of Western New York. |
| November.... | Bulletin 77..... | The Grafting of Grapes. |

NORTH CAROLINA STATION

| Date. | Publication | Title. |
|--------------------|-------------------------|--|
| 1893 | | |
| October 7 . . . | Bulletin 93 | Feeding Experiments: Experiments in Fattening Stock for Beef with Cotton-Seed Hulls and Meal, Corn Silage and Soja Bean Silage with Cotton-Seed Meal for Beef; Exclusive Silage Feeding, and What is a Maintenance Ration? |
| November 15 . . | Bulletin 93b | Meteorological Summary for October. |
| December 15 . . | Bulletin 93c | Meteorological Summary for November. Circular Inviting Attention to the Work of the State Weather Service. |
| December 30 . . | Bulletin 93d | Meteorological Summary for December. |
| | Annual Report | Sixteenth Annual Report, 1893. |
| | Annual Report | Seventh Annual Report of the Meteorological Division, 1893. |
| 1894. | | |
| January 1 . . . | Bulletin 94 | Horticultural Tests and Results with Garden Vegetables, Fruits, and Bulb Culture. |
| January 12 . . . | Bulletin 95 | The Fertilizer Control during 1893. |
| January 20 . . . | Bulletin 96 | Miscellaneous Agricultural Topics Contained in the Press Service Bulletins. |
| January 30 . . . | Bulletin 97 | Digestion Experiments. |
| March 1 | Bulletin 98 | Some Leguminous Crops and their Economic Value. |
| April 15 | Bulletin 99 | Thread Worm of Pork (<i>Trichina spiralis</i>). |
| March 26 | Bulletin 100 | Our Common Insects. |
| August 2 | Bulletin 101 | The Progress of the Dairy Industry in North Carolina. |
| August 3 | Bulletin 102 | Encouragement to the Dairy Interests of North Carolina through the Medium of the State Fairs. |
| August 17 . . . | Bulletin 103 | Miscellaneous Agricultural Topics Contained in the Press Service Bulletins of January to June, 1894. |
| August 18 . . . | Bulletin 104 | Why Pull Your Corn Fodder? |
| September 4 . . | Bulletin 105 | The Chestnut and its Weevil. Nut Culture for North Carolina. |
| September 6 . . | Bulletin 106 | Rational Stock Feeding. |
| September 6 . . | Bulletin 107 | Flow'ring Bulbs in North Carolina, and their Propagation for Florists' Use. |
| September 22 . . | Bulletin 108 | Seed Testing. Its Uses and Methods. |
| | Special. | |
| February 24 . . | Bulletin 16 | Fertilizer Analyses and the Fertilizer Control. |
| March 10 | Bulletin 17 | Fertilizer Analyses and the Fertilizer Control. |
| March 24 | Bulletin 18 | Fertilizer Analyses and the Fertilizer Control. |
| April 7 | Bulletin 19 | Fertilizer Analyses and the Fertilizer Control. |
| April 21 | Bulletin 20 | Fertilizer Analyses and the Fertilizer Control. |
| May 22 | Bulletin 21 | Fertilizer Analyses and the Fertilizer Control. |
| | State Weather Service. | |
| January 31 . . . | Bulletin 52 | Meteorological Summary for January. |
| February 28 . . | Bulletin 53 | Meteorological Summary for February. |
| March 31 | Bulletin 54 | Meteorological Summary for March. |
| April 30 | Bulletin 55 | Meteorological Summary for April. |
| May 31 | Bulletin 56 | Meteorological Summary for May. |
| June 30 | Bulletin 57 | Meteorological Summary for June. |
| July 31 | Bulletin 58 | Meteorological Summary for July. |
| August 31 | Bulletin 59 | Meteorological Summary for August. |
| September 30 . . | Bulletin 60 | Meteorological Summary for September. |
| October 31 . . . | Bulletin 61 | Meteorological Summary for October. |

NORTH DAKOTA STATION.

| | | |
|-------------------|-------------------------|--|
| 1894. | | |
| November . . . | Bulletin 11 | Grain and Forage Crops. |
| December . . . | Annual Report | Fourth Annual Report, 1894. |
| 1894. | | |
| January | Bulletin 12 | Transplanting Onions. |
| April | Bulletin 13 | Rational Selection of Wheat for Seed. Typhoid Fever. |
| June | Bulletin 14 | Tuberculosis. |
| September . . . | Bulletin 15 | Chemical Composition of Foods. |

OHIO STATION.

| | | |
|-------------------|-------------------------|--|
| 1893. | | |
| November . . . | Bulletin 50 | Experiments in Feeding for Milk. |
| December . . . | Bulletin 51 | Miscellaneous Entomological Papers. |
| December . . . | Bulletin 52 | Meteorological Summary for 1893. |
| | Annual Report | Twelfth Annual Report, 1893. |
| 1894. | | |
| March | Bulletin 53 | Field Experiments with Commercial Fertilizers. |
| October | Bulletin 54 | Strawberries: Cultural Notes, Comparison of Varieties. |

OKLAHOMA STATION.

| Date. | Publication. | Title. |
|--------------|------------------|--|
| 1893. | | |
| July..... | Bulletin 7..... | Water Analyses. |
| October..... | Bulletin 8..... | Tests of Varieties of Wheat. |
| 1894. | | |
| January..... | Bulletin 9..... | Test of Varieties of Vegetables in 1893. |
| April..... | Bulletin 10..... | Corn. |

OREGON STATION.

| | | |
|---------------|------------------|---|
| 1891. | Annual Report . | Third Annual Report, 1891. |
| 1892. | Annual Report . | Annual Report, 1892. |
| 1893. | | |
| December.... | Bulletin 27..... | Plant Diseases: Their Cause and Prevention. |
| 1894. | | |
| January..... | Bulletin 28..... | Continuation of Experiments in Pig Feeding. |
| February..... | Bulletin 29..... | Notes on Vegetables, Fruits. Pruning, etc. |
| March..... | Bulletin 30..... | Potatoes. Roots. |
| April..... | Bulletin 31..... | Progress of Work: Coddling Moth, Hop Louse, Flea Beetles, Radish Flies, Cutworms and Wireworms, Tent Caterpillars. Illustrations of Oregon Insects and Insect Work, Gophers and Moles, Capons and Caponizing. |

PENNSYLVANIA STATION.

| | | |
|--------------|------------------|---|
| 1892. | Annual Report . | Annual Report, 1892. |
| 1893. | | |
| October..... | Bulletin 25..... | Small Fruits in 1893. |
| | Annual Report . | Annual Report, 1893. |
| 1894. | | |
| January..... | Bulletin 26..... | Mangels and Sugar Beets <i>vs.</i> Silage—Yield, Cost, and Feeding Value. |
| April..... | Bulletin 27..... | Tests of Cream Separators. |

RHODE ISLAND STATION.

| | | |
|---------------|------------------|--|
| 1893. | | |
| September.... | Bulletin 25..... | Turkeys: Experiments with; Management of by Successful Producers; Wild Turkey Crosses, their Desirability, and Where They may be Obtained. |
| November.... | Bulletin 26..... | Fertilizers. Oats. Potato Scab. |
| March..... | Bulletin 27..... | Leaf Blight of the Pear. Raspberries. Distribution of Plants. |
| July..... | Bulletin 28..... | Rhode Island Soils. Fertilizers. |
| October..... | Bulletin 29..... | Fertilizers: Commercial and Special Formula. |

SOUTH CAROLINA STATION.

| | | |
|-------------|------------------|---|
| 1893. | | |
| March..... | Bulletin 9..... | Experiments with Irish Potatoes. |
| April..... | Bulletin 10..... | Notes on Varieties of Beans. |
| April..... | Bulletin 11..... | Analyses of Commercial Fertilizers, Part 1. |
| May..... | Bulletin 12..... | Cooperative Soil Tests of Fertilizers. |
| July..... | Bulletin 13..... | Analyses of Commercial Fertilizers, Part 2. |
| August..... | Bulletin 14..... | Experiments with Corn. |
| | Annual Report . | Sixth Annual Financial Report, 1893. |
| 1894. | | |
| March..... | Bulletin 15..... | Fertilizer Experiments with Corn. |
| April..... | Bulletin 16..... | Experiments with Tomatoes. |
| July..... | Bulletin 17..... | Analyses of Commercial Fertilizers. |
| August..... | Bulletin 18..... | Fertilizer Experiments with Cotton. |
| | Annual Report . | Seventh Annual Report. 1894. |

SOUTH DAKOTA STATION.

| | | |
|---------------|------------------|--------------------------------------|
| 1892. | Annual Report . | Fifth Annual Report, 1892. |
| 1893. | | |
| December.... | Bulletin 37..... | Horticulture and Forestry. |
| 1894. | | |
| January..... | Bulletin 38..... | Feeding Wheat to Hogs. |
| February..... | Bulletin 39..... | Milk Tests and Comparison Tables. |
| May..... | Bulletin 40..... | Native and Introduced Forage Plants. |

TENNESSEE STATION.

| Date | Publication. | Title. |
|---------------|---------------------------|--|
| 1893. | Annual Report. | Sixth Annual Report, 1893. |
| 1894. | | |
| January . . . | Bulletin. Vol VII. No. 1. | Grasses of Tennessee: Part 2. |
| October . . . | Bulletin. Vol VII. No. 2. | Fruits: Grapes, Strawberries, Raspberries, Blackberries, Pears, Apples, and Peaches. |

TEXAS STATION.

| | | |
|-----------------|----------------------|---|
| 1893. | | |
| December . . | Bulletin 28. | Sweet Potatoes. |
| December . . | Bulletin 29. | Effects of Cotton Seed and Cotton-Seed Meal on Butter, Beef Tallow, Lard, and Sheep Suet. |
| | Annual Report . . | Sixth Annual Report, 1893. |
| 1894. | | |
| March | Bulletin 30. | Veterinary Science: Glanders Experiments; Tuberculin Experiments; Lump Jaw of Cattle; Notes on Parasites; Texas Fever Experiments; Device for Destroying Ticks. |
| June | Bulletin 31. | Insects Injurious to Stored Grain. |

UTAH STATION.

| | | |
|-----------------|----------------------|---|
| 1893. | | |
| October | Bulletin 25. | Fruits; and Forest, Shade and Ornamental Trees. |
| December . . . | Bulletin 26. | Subirrigation <i>vs.</i> Surface Irrigation. |
| | Annual Report . . | Fourth Annual Report, 1893. |
| 1894. | | |
| March | Bulletin 27. | Early, Late, and Usual Irrigation. |
| April | Bulletin 28. | The Value of Grass in the Production of Pork. Exercise <i>vs.</i> Non-exercise for Pigs. |
| May | Bulletin 29. | Irrigation: Amount of Water to Use. Relative Feeding Values of Timothy, Lucern, and Wild Hay. |
| June | Bulletin 30. | Narrow <i>vs.</i> Wide Nutritive Rations for Horses. |
| June | Bulletin 31. | Time to Harvest Lucern. Mulching. |
| June | Bulletin 32. | Roots and Plants of Farm Crops. |
| June | Bulletin 33. | Grazing Values of Varieties of Grass. Drilling <i>vs.</i> Broadcasting Grass Seed. |
| July | Bulletin 34. | Relative Value of Wheat, Peas, Corn, and Barley in the Production of Pork. |
| August | Bulletin 35. | The Value of Straw and Grain as a Substitute for Hay. Short Spring Periods of Grain Feeding. Relative Value of Ensilage, Roots, and Straws as Condiments. Value of Different Grain Rations. |
| September . . | Bulletin 36. | Relative Value of Corn and Oats for Horses. |

VERMONT STATION.

| | | |
|-----------------|----------------------|--|
| 1893. | | |
| | Bulletin 36. | Potato Blights and their Remedies. |
| | Bulletin 37. | Annual Report of the Director, Part I. |
| | Bulletin 38. | Annual Report of the Director, Part II. |
| | Bulletin 39. | Annual Report of the Director, Part III. |
| December . . . | Bulletin 40. | Spraying Potatoes. |
| | Annual Report . . | Seventh Annual Report, 1893. |
| 1894. | | |
| April | Bulletin 41. | Analyses of Commercial Fertilizers. |
| July | Bulletin 42. | Bovine Tuberculosis. |

VIRGINIA STATION.

| | | |
|-----------------|----------------------|--|
| 1893. | | |
| July | Bulletin 30. | Grape Culture. |
| August | Bulletin 31. | Tests of Fertilizers on Corn. |
| September . . | Bulletin 32. | The Cow in Relation to Public Health. |
| October | Bulletin 33. | Corn Husker and Fodder Cutter. |
| November . . . | Bulletin 34. | Roads and Road Making. |
| December . . . | Bulletin 35. | Fertilizer Tests on Grapes. |
| | Annual Report . . | Annual Report, 1893. |
| 1894. | | |
| January | Bulletin 36. | The Horse's Tooth. |
| February . . . | Bulletin 37. | Strawberry Culture. |
| March | Bulletin 38. | Are All Birds of Prey Injurious to the Farmer? |
| April | Bulletin 39. | Tuberculosis. |

WASHINGTON STATION.

| Date. | Publication. | Title. |
|----------------|-------------------|--|
| 1893. | | |
| January | Bulletin 7 | Two Injurious Insects. |
| June | Bulletin 8 | Common Fungus Diseases and Methods of Prevention. Dodder. |
| | Bulletin 9 | Sugar Beets. |
| December | Bulletin 10 | Wheats, Barleys, Oats, Peas, and Forage Crops. Review of Weather and Crops in Washington for 1893. |
| | Annual Report .. | Third Annual Report, 1893. |
| 1894. | | |
| February | Bulletin 11 | Preliminary Report of a Feeding Test with Swine. |
| | Bulletin 13 | Washington Soils. |

WEST VIRGINIA STATION.

| | | |
|-----------------|-------------------|--|
| 1893. | | |
| May | Bulletin 32 | West Virginia Forest and Shade Tree Insects. |
| September | Bulletin 33 | Subirrigation in the Greenhouse. |
| December | Bulletin 34 | Fertilizer Analyses for the Year Ending December 31, 1893. |
| 1894. | | |
| January | Bulletin 35 | Defects in Wood Caused by Insects. |
| February | Bulletin 36 | Black Holes in Wood. |
| August 1 | Special | Fertilizer Analyses. |

WISCONSIN STATION.

| | | |
|---------------|-------------------|--|
| 1894. | | |
| January | Bulletin 38 | One Hundred American Rations for Dairy Cows. |
| April | Bulletin 39 | Noxious Weeds. |
| July | Bulletin 40 | Tuberculosis and the Tuberculin Test. |
| August | Bulletin 41 | Grain Feeding Lambs for Market. |
| October | Bulletin 42 | Destructive Effects of Winds on Sandy Soils and Light Sandy Loams, with Methods of Protection. |

WYOMING STATION.

| | | |
|-----------------|-------------------|--|
| 1893. | | |
| December | Bulletin 15 | The Winter Killing of Trees and Shrubs. |
| December | Bulletin 16 | Grasses and Forage Plants. |
| | Annual Report .. | Third Annual Report, 1893. |
| 1894. | | |
| March | Bulletin 17 | Crop Report for 1893. Cost and Profit of Growing Wheat. Sugar Beets. Garden Vegetables and Tobacco. Progress Report on Fruits and Trees. Meteorology for 1893. |
| June | Bulletin 18 | The Reclamation of Arid Lands The Harvey Water Motor. |
| September | Bulletin 19 | Squirrel-Tail Grass. |
| October | Bulletin 20 | The Artesian Wells of Southern Wyoming: Their History and Relation to Irrigation. |

FEDERAL LEGISLATION AFFECTING AGRICULTURAL COLLEGES AND EXPERIMENT STATIONS.

ACT OF 1891 DONATING LANDS FOR AGRICULTURAL COLLEGES.

AN ACT donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That there be granted to the several States, for the purposes hereinafter mentioned, an amount of public land, to be apportioned to each State a quantity equal to thirty thousand acres for each Senator and Representative in Congress to which the States are respectively entitled by the apportionment under the census of eighteen hundred and sixty: *Provided*, That no mineral lands shall be selected or purchased under the provisions of this act.

SEC. 2. That the land aforesaid, after being surveyed, shall be apportioned to the several States in sections or subdivisions of sections, not less than one quarter of a section; and whenever there are public lands in a State subject to sale at private entry at one dollar and twenty-five cents per acre, the quantity to which said State shall be entitled shall be selected from such lands within the limits of such State, and the Secretary of the Interior is hereby directed to issue to each of the States in which there is not the quantity of public lands subject to sale at private entry at one dollar and twenty-five cents per acre, to which said State may be entitled under the provisions of this act, land scrip to the amount in acres for the deficiency of its distributive share; said scrip to be sold by said States and the proceeds thereof applied to the uses and purposes prescribed in this act, and for no other use or purpose whatsoever: *Provided*, That in no case shall any State to which land scrip may thus be issued be allowed to locate the same within the limits of any other State, or of any Territory of the United States, but their assignees may thus locate said land scrip upon any of the unappropriated lands of the United States subject to sale at private entry at one dollar and twenty-five cents, or less, per acre: *And provided further*, That not more than one million acres shall be located by such assignees in any one of the States: *And provided further*, That no such location shall be made before one year from the passage of this act.

SEC. 3. That all the expenses of management, superintendence, and taxes from date of selection of said lands, previous to their sales, and all expenses incurred in the management and disbursement of the moneys which may be received therefrom, shall be paid by the States to which they may belong, out of the treasury of said States, so that the entire proceeds of the sale of said lands shall be applied without any diminution whatever to the purposes hereinafter mentioned.

SEC. 4. That all moneys derived from the sale of the lands aforesaid by the States to which the lands are apportioned, and from the sales of land scrip hereinbefore provided for, shall be invested in stocks of the United States, or of the States, or some other safe stocks, yielding not less than five per centum upon the par value of said stocks; and that the moneys so invested shall constitute a perpetual fund, the capital of which shall remain forever undiminished (except so far as may be provided in section fifth of this act), and the interest of which shall be inviolably

appropriated, by each State which may take and claim the benefit of this act, to the endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.

SEC. 5. That the grant of land and land scrip hereby authorized shall be made on the following conditions, to which, as well as to the provisions hereinbefore contained, the previous assent of the several States shall be signified by legislative acts:

First. If any portion of the fund invested, as provided by the foregoing section, or any portion of the interest thereon, shall, by any action or contingency, be diminished or lost, it shall be replaced by the State to which it belongs, so that the capital of the fund shall remain forever undiminished; and the annual interest shall be regularly applied without diminution to the purposes mentioned in the fourth section of this act, except that a sum, not exceeding ten per centum upon the amount received by any State under the provisions of this act, may be expended for the purchase of lands for sites or experimental farms, whenever authorized by the respective legislatures of said States.

Second. No portion of said fund, nor the interest thereon, shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation, or repair of any building or buildings.

Third. Any State which may take and claim the benefit of the provisions of this act shall provide, within five years, at least not less than one college, as described in the fourth section of this act, or the grant to such State shall cease; and said State shall be bound to pay the United States the amount received of any lands previously sold, and that the title to purchasers under the State shall be valid.

Fourth. An annual report shall be made regarding the progress of each college, recording any improvements and experiments made, with their costs and results, and such other matters, including State industrial and economical statistics, as may be supposed useful; one copy of which shall be transmitted by mail free, by each, to all the other colleges which may be endowed under the provisions of this act, and also one copy to the Secretary of the Interior.

Fifth. When lands shall be selected from those which have been raised to double the minimum price, in consequence of railroad grants, they shall be computed to the States at the maximum price, and the number of acres proportionally diminished.

Sixth. No State while in a condition of rebellion or insurrection against the Government of the United States shall be entitled to the benefit of this act.

Seventh. No State shall be entitled to the benefits of this act unless it shall express its acceptance thereof by its legislature within two years from the date of its approval by the President.

SEC. 6. That land scrip issued under the provisions of this act shall not be subject to location until after the first day of January, one thousand eight hundred and sixty-three.

SEC. 7. That the land officers shall receive the same fees for locating land scrip issued under the provisions of this act as is now allowed for the location of military bounty land warrants under existing laws: *Provided*, Their maximum compensation shall not be thereby increased.

SEC. 8. That the governors of the several States to which scrip shall be issued under this act shall be required to report annually to Congress all sales made of such scrip until the whole shall be disposed of, the amount received for the same, and what appropriation has been made of the proceeds.

Approved, July 2, 1862.

ACT OF 1887 ESTABLISHING AGRICULTURAL EXPERIMENT STATIONS

AN ACT to establish agricultural experiment stations in connection with the colleges established in the several States under the provisions of an act approved July second, eighteen hundred and sixty-two, and of the acts supplementary thereto.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in order to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science, there shall be established, under direction of the college or colleges or agricultural department of colleges in each State or Territory established, or which may hereafter be established, in accordance with the provisions of an act approved July second, eighteen hundred and sixty-two entitled "An act donating public lands to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts," or any of the supplements to said act, a department to be known and designated as an "agricultural experiment station:" *Provided,* That in any State or Territory in which two such colleges have been or may be so established the appropriation hereinafter made to such State or Territory shall be equally divided between such colleges, unless the legislature of such State or Territory shall otherwise direct.

SEC. 2. That it shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective States or Territories.

SEC. 3. That in order to secure, as far as practicable, uniformity of methods and results in the work of said stations, it shall be the duty of the United States Commissioner of Agriculture to furnish forms, as far as practicable, for the tabulation of results of investigation or experiments; to indicate from time to time, such lines of inquiry as to him shall seem most important; and, in general, to furnish such advice and assistance as will best promote the purpose of this act. It shall be the duty of each of said stations annually, on or before the first day of February, to make to the governor of the State or Territory in which it is located a full and detailed report of its operations, including a statement of receipts and expenditures, a copy of which report shall be sent to each of said stations, to the said Commissioner of Agriculture, and to the Secretary of the Treasury of the United States.

SEC. 4. That bulletins or reports of progress shall be published at said stations at least once in three months, one copy of which shall be sent to each newspaper in the States or Territories in which they are respectively located, and to each individual actually engaged in farming as may request the same, and as far as the means of the station will permit. Such bulletins or reports and the annual reports of said stations shall be transmitted in the mails of the United States free of charge for postage, under such regulations as the Postmaster-General may from time to time prescribe.

SEC. 5. That for the purpose of paying the necessary expenses of conducting investigations and experiments and printing and distributing the results as hereinbefore

prescribed, the sum of fifteen thousand dollars per annum is hereby appropriated to each State, to be specially provided for by Congress in the appropriations from year to year, and to each Territory entitled under the provisions of section eight of this act, out of any money in the Treasury proceeding from the sales of public lands, to be paid in equal quarterly payments, on the first day of January, April, July, and October in each year, to the treasurer or other officer duly appointed by the governing boards of said colleges to receive the same, the first payment to be made on the first day of October, eighteen hundred and eighty-seven: *Provided, however,* That out of the first annual appropriation so received by any station an amount not exceeding one-fifth may be expended in the erection, enlargement, or repair of a building or buildings necessary for carrying on the work of such station; and thereafter an amount not exceeding five per centum of such annual appropriation may be so expended.

SEC. 6 That whenever it shall appear to the Secretary of the Treasury from the annual statement of receipts and expenditures of any of said stations that a portion of the preceding annual appropriation remain unexpended, such amount shall be deducted from the next succeeding annual appropriation to such station, in order that the amount of money appropriated to any station shall not exceed the amount actually and necessarily required for its maintenance and support.

SEC. 7. That nothing in this act shall be construed to impair or modify the legal relation existing between any of the said colleges and the government of the States or Territories in which they are respectively located.

SEC. 8. That in States having colleges entitled under this section to the benefits of this act and having also agricultural experiment stations established by law separate from said colleges, such States shall be authorized to apply such benefits to experiments at stations so established by such States; and in case any State shall have established under the provisions of said act of July second, aforesaid, an agricultural department or experimental station, in connection with any university, college, or institution not distinctively an agricultural college or school, and such State shall have established or shall hereafter establish a separate agricultural college or school, which shall have connected therewith an experimental farm or station, the legislature of such State may apply in whole or in part the appropriation by this act made to such separate agricultural college or school, and no legislature shall by contract express or implied disable itself from so doing.

SEC. 9. That the grants of moneys authorized by this act are made subject to the legislative assent of the several States and Territories to the purposes of said grants: *Provided,* That payment of such installments of the appropriation herein made as shall become due to any State before the adjournment of the regular session of its legislature meeting next after the passage of this act shall be made upon the assent of the governor thereof duly certified to the Secretary of the Treasury.

SEC. 10. Nothing in this act shall be held or construed as binding the United States to continue any payments from the Treasury to any or all the States or institutions mentioned in this act, but Congress may at any time amend, suspend, or repeal any or all the provisions of this act.

Approved, March 2, 1887.

ACT OF 1890 FOR THE FURTHER ENDOWMENT OF AGRICULTURAL COLLEGES.

AN ACT to apply a portion of the proceeds of the public lands to the more complete endowment and support of the colleges for the benefit of agriculture and the mechanic arts established under the provisions of an act of Congress approved July second, eighteen hundred and sixty-two.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there shall be, and hereby is, annually appropriated, out of any money in the Treasury not otherwise appropriated, arising from the sales of public lands, to be paid as hereinafter provided to each State and Territory for the more complete endowment and maintenance of colleges for the benefit of agriculture and the mechanic arts now established, or which may be hereafter established,

in accordance with an act of Congress approved July second, eighteen hundred and sixty-two, the sum of fifteen thousand dollars for the year ending June thirtieth, eighteen hundred and ninety, and an annual increase of the amount of such appropriation thereafter for ten years by an additional sum of one thousand dollars over the preceding year, and the annual amount to be paid thereafter to each State and Territory shall be twenty-five thousand dollars, to be applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural, and economic science, with special reference to their applications in the industries of life, and to the facilities for such instruction: *Provided*, That no money shall be paid out under this act to any State or Territory for the support and maintenance of a college where a distinction of race or color is made in the admission of students, but the establishment and maintenance of such colleges separately for white and colored students shall be held to be a compliance with the provisions of this act if the funds received in such State or Territory be equitably divided as hereinafter set forth: *Provided*, That in any State in which there has been one college established in pursuance of the act of July second, eighteen hundred and sixty-two, and also in which an educational institution of like character has been established, or may be hereafter established, and is now aided by such State from its own revenue, for the education of colored students in agriculture and the mechanic arts, however named or styled, or whether or not it has received money heretofore under the act to which this act is an amendment, the legislature of such State may propose and report to the Secretary of the Interior a just and equitable division of the fund to be received under this act between one college for white students and one institution for colored students established as aforesaid, which shall be divided into two parts and paid accordingly, and thereupon such institution for colored students shall be entitled to the benefits of this act and subject to its provisions, as much as it would have been if it had been included under the act of eighteen hundred and sixty-two, and the fulfillment of the foregoing provisions shall be taken as a compliance with the provision in reference to separate colleges for white and colored students.

SEC. 2. That the sums hereby appropriated to the States and Territories for the further endowment and support of colleges shall be annually paid on or before the thirty-first day of July of each year, by the Secretary of the Treasury, upon the warrant of the Secretary of the Interior, out of the Treasury of the United States, to the State or Territorial treasurer, or to such officer as shall be designated by the laws of such State or Territory to receive the same, who shall, upon the order of the trustees of the college, or the institution for colored students, immediately pay over said sums to the treasurers of the respective colleges or other institutions entitled to receive the same, and such treasurers shall be required to report to the Secretary of Agriculture and to the Secretary of the Interior, on or before the first day of September of each year, a detailed statement of the amount so received and of its disbursement. The grants of moneys authorized by this act are made subject to the legislative assent of the several States and Territories to the purpose of said grants: *Provided*, That payments of such installments of the appropriation herein made as shall become due to any State before the adjournment of the regular session of legislature meeting next after the passage of this act shall be made upon the assent of the governor thereof, duly certified to the Secretary of the Treasury.

SEC. 3. That if any portion of the moneys received by the designated officer of the State or Territory for the further and more complete endowment, support, and maintenance of colleges, or of institutions for colored students, as provided in this act, shall, by any action or contingency, be diminished or lost, or be misapplied, it shall be replaced by the State or Territory to which it belongs, and until so replaced no subsequent appropriation shall be apportioned or paid to such State or Territory; and no portion of said moneys shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation, or repair of any building or buildings. An annual report by the president of each of said colleges shall be

made to the Secretary of Agriculture, as well as to the Secretary of the Interior, regarding the condition and progress of each college, including statistical information in relation to its receipts and expenditures, its library, the number of its students and professors, and also as to any improvements and experiments made under the direction of any experiment stations attached to said colleges, with their costs and results, and such other industrial and economical statistics as may be regarded as useful, one copy of which shall be transmitted by mail free to all other colleges further endowed under this act.

SEC. 4. That on or before the first day of July in each year, after the passage of this act, the Secretary of the Interior shall ascertain and certify to the Secretary of the Treasury as to each State and Territory whether it is entitled to receive its share of the annual appropriation for colleges, or of institutions for colored students, under this act, and the amount which thereupon each is entitled, respectively, to receive. If the Secretary of the Interior shall withhold a certificate from any State or Territory of its appropriation the facts and reasons therefor shall be reported to the President, and the amount involved shall be kept separate in the Treasury until the close of the next Congress, in order that the State or Territory may, if it should so desire, appeal to Congress from the determination of the Secretary of the Interior. If the next Congress shall not direct such sum to be paid it shall be covered into the Treasury. And the Secretary of the Interior is hereby charged with the proper administration of this law.

SEC. 5. That the Secretary of the Interior shall annually report to Congress the disbursements which have been made in all the States and Territories, and also whether the appropriation of any State or Territory has been withheld, and if so, the reasons therefor.

SEC. 6. Congress may at any time amend, suspend, or repeal any or all of the provisions of this act.

Approved, August 30, 1890.

EXTRACT FROM AN ACT MAKING APPROPRIATIONS FOR THE DEPARTMENT OF AGRICULTURE FOR THE FISCAL YEAR ENDING JUNE THIRTIETH, EIGHTEEN HUNDRED AND NINETY-FIVE.

AGRICULTURAL EXPERIMENT STATIONS: To carry into effect the provisions of an act approved March second, eighteen hundred and eighty-seven, * * * and to enforce the execution thereof, seven hundred and forty-five thousand dollars, twenty-five thousand dollars of which sum shall be payable upon the order of the Secretary of Agriculture to enable him to carry out the provisions of section three of said act of March second, eighteen hundred and eighty-seven; and the Secretary of Agriculture shall prescribe the form of the annual financial statement required by section three of the said act of March second, eighteen hundred and eighty-seven; shall ascertain whether the expenditures under the appropriation hereby made are in accordance with the provisions of the said act, and shall make report thereon to Congress; and the Secretary of Agriculture is hereby authorized to employ such assistants, clerks, and other persons as he may deem necessary, and to incur such other expenses in traveling, stationery, and office fixtures as he may find essential in carrying out the objects of the above acts, and the sums apportioned to the several States shall be paid quarterly in advance. And the Secretary of Agriculture is hereby authorized to furnish to such institutions or individuals as may care to buy it copies of the card index of agricultural literature prepared by the Office of Experiment Stations, and charge for the same a price covering the additional expense involved in the preparation of these copies, and he is hereby authorized to apply the moneys received toward the expense of the preparation of the index.

REGULATIONS OF THE POST-OFFICE DEPARTMENT FOR THE FREE TRANSMISSION IN THE MAILS OF THE BULLETINS AND REPORTS OF AGRICULTURAL EXPERIMENT STATIONS UNDER THE ACT OF CONGRESS OF MARCH 2, 1887.

(1) Any claimant of the privilege must apply for authority to exercise it to the Postmaster General, stating the date of the establishment of such station, its proper name or designation, its official organization, and the names of its officers; the name of the university, college, school, or institution to which it is attached, if any, the legislation of the State or Territory providing for its establishment, and any other granting it the benefits of the provision made by Congress as aforesaid (accompanied by a copy of the act or acts), and whether any other such station in the same State or Territory is considered, or claims to be, also entitled to the privilege; and also the place of its location and the name of the post-office where the bulletins and reports will be mailed. The application must be signed by the officer in charge of the station.

(2) If such application be allowed after examination by the Department, the postmaster of the proper office will be instructed to admit such bulletins and reports to the mails in compliance with these regulations, and the officer in charge of the station will be notified thereof.

(3) Paragraph 3, section 419, Postal Laws and Regulations 1887, is hereby amended so as to read as follows:

"Only such bulletins or reports as shall have been issued after the station became entitled to the benefits of the act can be transmitted free, and such bulletins or reports may be inclosed in envelopes or wrappers, sealed or unsealed. On the exterior of every envelope, wrapper, or package must be written or printed the name of the station and place of its location, the designation of the inclosed bulletin or report, and the word 'Free' over the signature or facsimile thereof of the officer in charge of the station, to be affixed by himself, or by some one duly deputed by him for that purpose. There may also be written or printed upon the envelope or wrapper a request that the postmaster at the office of delivery will notify the mailing station of the change of address of the addressee, or other reason for inability to deliver the same, and upon a bulk package a request to the postmaster to open and distribute the 'franked' matter therein, in accordance with the address thereon.

"Bulletins published by the U. S. Department of Agriculture and analogous to those of the station, and entitled to be mailed free under the penalty envelope of that Department, may also be adopted and mailed by the several stations, with their own publications, under the same regulations, and any bulletins or reports mailable free by any agricultural experiment station under these regulations may be so mailed by any other station having free mailing authority.

"If such station's annual reports be printed by State authority, and consist in part of matter relating to the land-grant college to which such station is attached then said report may be mailed free entire by the director of the station; provided, in his judgment, the whole consists of useful information of an agricultural character."

The Post-Office Department has recently ruled that "in sending out bulletins from an agricultural experiment station it is permissible to inclose postal cards to enable correspondents of the station to acknowledge the receipt of its publications and to request their continuous transmission."

(4) The bulletins may be mailed to the stations, newspapers, or persons to whom they are by the foregoing act authorized to be sent, and the annual reports to any address within the United States.

RULINGS OF THE TREASURY DEPARTMENT AS TO THE CONSTRUCTION
OF THE ACT OF CONGRESS OF MARCH 2, 1887, ESTABLISHING AGRICULTURAL EXPERIMENT STATIONS.

From copies of letters addressed to the Secretary of the Treasury and others by the First Comptroller of the Treasury, relating to the construction of the act of Congress of March 2, 1887, and acts supplementary thereto, the following digest has been prepared for the use of the stations. The sections are those of the act, the dates those of the decisions by the Comptroller:

Section 3—January 30, 1888.

That the annual financial statement of the stations, with vouchers, should not be sent to the Treasury Department, but that a copy simply of the report that is made to the governor is to be sent to the Secretary of the Treasury.

Section 3—January 31, 1888.

First. That the Treasury Department will not require officers of experiment stations to do or perform anything not specifically required by said bill.

Second. That the Secretary of the Treasury is not required to take a bond of the officers of said stations for the money paid over under the provisions of said act.

Third. That no reports will be required from the stations directly to the Secretary of the Treasury; but the governor of the State must send to the Secretary of the Treasury a copy of the report made to him by the colleges or stations.

Section 5—March 4, 1887.

"Congress only intended by the expression 'the sum of fifteen thousand dollars is hereby appropriated to each State,' to fix the amount that could be specially provided for by Congress in appropriations from year to year. Hence I conclude that section 5 does not make an appropriation; but that the same must be specially provided for by Congress."

Sections 5 and 6—March 10, 1888.

(1) The appropriations are intended for the fiscal year and not the calendar year.

(2) The first annual report should be made on or before the 1st day of February, 1889, and said report should include simply the operations of the preceding fiscal year, not down to and including December 31, but up to and including June 30, 1888.

(3) The balance unexpended at the end of the fiscal year, the 30th of June preceding the report, must be accounted for in the report.

(4) The one-fifth proviso for building in section 5 can be made out of the first annual appropriation, to wit, that which commences on the 1st day of July, 1887, and terminates on the 30th of June, 1888.

(5) The intention of Congress was to make quarterly payments, not in advance, but at the end of each quarter.

Section 5, proviso—March 22, 1888.

"I have been informed that there is no farm connected with the agricultural college in Delaware. The act provides that one-fifth of the amount appropriated can be expended in the creation, enlargement, or repair of a building or buildings for carrying on the work of the station receiving the appropriation. I am in doubt whether, with this qualification, out of the balance of the appropriation a farm could either be purchased or rented. Another question in my mind is as to the competency of the legislature which was in session at the date of the passage of the act to accept, as it assumed to do, of the provisions of the act, the ninth section of which provides that 'Payment of such installments of the appropriation herein made as shall become due to any State before the adjournment of the regular session of its legislature meeting next after the passage of this act shall be made upon the assent of the governor thereof duly certified to the Secretary of the Treasury.'"

Section 6—April 24, 1888.

At the end of the present fiscal year, to wit, June 30, any portion of the \$15,000 which shall have been received, up to and including the payment made on the 1st day of July, which is unexpended, or which may not be necessary to pay claims under contracts made for the benefit of said agricultural station, must be deducted from the next annual appropriation, as specified in said sixth section.

Section 6—August 2, 1888.

The fiscal year commences on the 1st day of July, corresponding with the fiscal year of the Government.

An agricultural station entitled to the benefits of said appropriations made by Congress can anticipate the payment to be made July 1, and make contracts of purchases prior to that time, if it shall be necessary to carry on the work of the station. Of course no portion of said appropriations paid in quarterly installments can be drawn from the Treasury unless needed for the purposes indicated in the act; and so much of what is so drawn as may not have been expended within the year must be accounted for as part of the appropriation for the following year.

Section 8—January 30, 1888.

The State of New York ought to designate whether to the college or to the station, or to both, it desires the appropriation to be applied. The eighth section of the act seems to authorize the State to apply such benefits to experimental stations it may have established as it desires.

Where there are no experimental stations connected with the colleges, the legislatures of such States must connect the agricultural experiment stations with the colleges already established under the act of July 2, 1862; there is no authority in the act authorizing the establishment of agricultural experiment stations independent of said colleges.

The act contemplates that where stations have already been established disconnected from the colleges, the legislatures of such States may take such provisions in regard thereto as they may deem proper; but it does not authorize the establishment of stations except in connection with the colleges that were at that time or might thereafter be established under the act of July 2, 1862.

Section 8—February 14, 1888.

Where there is an agricultural college or station which may have been established by State authority, and is maintained by the State, the eighth section of the above act would authorize the State to designate the station to which it desired the appropriation to be applied, whether to one or more, or all, and the Secretary of the Treasury should make the payment under the appropriation to whichever one the State might designate.

Sections 1 and 8—February 15, 1888.

(1) When an agricultural college or station has been established under the act of July 2, 1862, each college is entitled to the benefits of the provisions of said act (i. e., of March 2, 1887).

(2) In a State where an agricultural college has been established under the act of July 2, 1862, and agricultural stations have also been established, either under the act of July 2, 1862, or by State authority, before March 2, 1887, the legislature of such State shall determine which one of said institutions, or how many of them, shall receive the benefits of the act of March 2, 1887.

(3) If the legislature of any State in which an agricultural college has been established under the act of July 2, 1862, desires to establish an agricultural station which shall be entitled to the benefits of said act, it must establish such station in connection with said college.

Proviso to section 1 and section 8—December 7, 1888.

It is within the power of the legislature of any State that has accepted the provisions of said act of March 2, 1887, to dispose of the amount appropriated by Congress for said station to either one or all of the agricultural colleges or station which may have been established in said State by virtue of either the provisions of the act of July 2, 1862, or the provisions of said eighth section of the act of March 2, 1887.

The whole responsibility rests upon the State legislature as to how the fund appropriated by Congress shall be distributed among these various institutions of the State, provided there is one or more agricultural colleges with which an agricultural station is connected, or one or more agricultural stations.

Section 8—January 28, 1889.

The act of the State of Georgia in authorizing the governor to receive the fund to which the State may be entitled under the act of March 2, 1887, is not in conflict with any of the provisions of said act. If a State has established an agricultural college or station under the act of July 2, 1862, or if it has established an agricultural station in connection with said college, as provided in the eighth section of the act of March 2, 1887, the legislature can authorize some person or persons to receive the money donated by the Government and direct its application in such way and manner as it seems best to carry out the objects and purposes of said acts of Congress to either the colleges or the station, or to both.

Section 9—February 4, 1888.

It appears by the statement of Representative Blount that there was a session of the legislature of the State of Georgia after the passage of the act and before the first payment became due, October 1, 1887, and which did not adjourn until after that time. That being the case, under the proviso of the section, the governor of the State can not assent to that payment, which was to be made October 1, 1887. The legislature having adjourned before the second payment became due, without accepting the provisions of the bill, no further payment can be made to said State until the legislature thereof shall have accepted the provisions of the bill. You will observe the language of the proviso, "that payments of the installments of the appropriation herein made as shall become due to any State before the adjournment of the regular session of its legislature" applies, certainly, only to such installments as become due before the final adjournment. The idea seems to be to give the legislature the full time before it adjourns to accept the provisions of the bill or not; but it is plain to my mind that only such payments as become due before the adjournment of the legislature can be accepted by the governor of the State.

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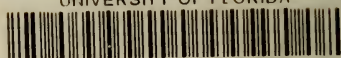
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